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: FINAL PERMIT TO INSTALL
MERCER COUNTY
Application No: 03-17269
Fac ID: 0354010055

DATE: 10/4/2007

	TOXIC REVIEW
	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
Dc,VV, kb	**NSPS**
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

Mercer Energy, Inc.
Ryan Schwieterman
1251 Myers Rd.
Celina, OH 45822

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

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.

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

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

Sincerely,

Michael W. Ahern

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

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

Permit To Install **Issue Date: 10/4/2007**
Terms and Conditions **Effective Date: 10/4/2007**

FINAL PERMIT TO INSTALL 03-17269

Application Number:	03-17269
Facility ID:	0354010055
Permit Fee:	**$23500**
Name of Facility:	Mercer Energy, Inc.
Person to Contact:	Ryan Schwieterman
Address:	1251 Myers Rd. Celina, OH 45822

Location of proposed air contaminant source(s) [emissions unit(s)]:
7064 Four Turkey Rd.
Celina, **Ohio**

Description of proposed emissions unit(s):
Ethanol Production Facility (wet corn mill).

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
VOC	97.00
NOx	68.43
CO	90.83
TSP	95.01
PM10	76.30
SO2	30.49

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) - 96 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 Dc and OAC rule 3745-17-07(A)(1). Nitrogen oxides (NOx) emissions shall not exceed 0.040 pounds per million British thermal units (lbs/mmBtu) of actual heat input and 16.82 tons per year. Carbon monoxide (CO) emissions shall not exceed 3.84 pounds per hour (lbs/hr) and 16.82 tons per year.
ORC 3704.03(T)(4)	See Section A.2.a.
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 3745-17-10(B)(1)	0.020 lb PE/mmBtu of heat input (see A.2.e)
40 CFR Part 60, Subpart Dc	See Section B.1.
OAC rule 3745-21-08(B)	See Section A.2.c.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.2.
OAC rule 3745-18-06	Exempt (see A.2.b).

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 the PM10 and VOC emissions from this air contaminant source since the uncontrolled potentials to emit for PM10 and VOC is each less than ten tons per year.

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The uncontrolled PTEs for PM10 are 0.72 lb/hr* and 3.13 tons/yr. The uncontrolled PTEs for VOCs are 0.52 lb/hr* and 2.27 tons/yr.

* using AP-42, Section 1.4, Table 1.4-2 (revised 7/98) emission factors

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 All emissions of particulate matter are PM10.

2.e The potential to emit for emissions of particulate matter from this emissions unit (See A.2.a) is less than the emission limitation pursuant to this rule.

B. Operational Restrictions

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

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 permit to install for emission units B001, B002, J001, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration

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(MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: n-Hexane
TLV (mg/m3): 176.24
Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 38.31
MAGLC (ug/m3): 4,196

Pollutant: Acetaldehyde
TLV (mg/m^3): 45
Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
MAGLC (ug/m^3): 1071

Pollutant: Methanol
TLV (mg/m^3): 262
Maximum Hourly Emission Rate (lbs/hr): 0.24 (permit total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
MAGLC (ug/m^3): 6238

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.).

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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.

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

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. This emissions unit is subject to the applicable provisions of Subpart Dc of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

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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 Environmental Protection Agency
Northwest District Office
Division of Air Pollution Control
347 North Dunbridge Road
Bowling Green, Ohio 43402

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 on at least one of the following emissions units: B001 and B002.

   b. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which emissions unit B001 or B002, whichever startup occurs first, will be operated, but not later than 180 days after initial startup of emissions units B001 and B002, whichever startup occurs first.

   c. The emission testing shall be conducted to demonstrate compliance with the emission limitations of 0.040 lb NOx/mmBtu and 3.84 lbs CO/hr.

   d. 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.

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

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

a. <u>Emissions Limitations:</u>
0.040 lb NOx/mmBtu and 16.82 tons/yr NOx

<u>Applicable Compliance Method:</u>
Compliance with the 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, Subpart A.

The annual emission limitation was developed by multiplying the lb NOx/mmBtu limitation by the maximum heat input capacity of 96.0 mmBtu/hr, the maximum operating schedule of 8760 hours/year, and then applying the conversion factor of 2000 lb/ton. 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:
3.84 lbs CO/hr and 16.82 tons/yr 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, Subpart A.

The annual emission limitation was developed by multiplying the hourly CO 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.

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

Applicable Compliance Method:
The potential to emit for emissions of particulate matter from this emissions unit is less than the emission limitation pursuant to this rule.

The potential to emit for this emissions unit is 0.72 lb PM10/hour and was determined 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 96 mmBtu/hr, and then dividing by the heating value of 1020 mmBtu/mm scf. All emissions of particulate matter are PM10.

If required, the permittee shall demonstrate compliance with the emission limitation above pursuant to OAC rule 3745-17-03(B)(10).

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

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 - (B002) - 96 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 Dc and OAC rule 3745-17-07(A)(1). Nitrogen oxides (NOx) emissions shall not exceed 0.040 pounds per million British thermal units (lbs/mmBtu) of actual heat input and 16.82 tons per year. Carbon monoxide (CO) emissions shall not exceed 3.84 pounds per hour (lbs/hr) and 16.82 tons per year.
ORC 3704.03(T)(4)	See Section A.2.a.
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 3745-17-10(B)(1)	0.020 lb PE/mmBtu of heat (see A.2.e)
40 CFR Part 60, Subpart Dc	See Section B.1.
OAC rule 3745-21-08(B)	See Section A.2.c.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.2.
OAC rule 3745-18-06	Exempt (see A.2.b).

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 the PM10 and VOC emissions from this air contaminant source since the uncontrolled potentials to emit for PM10 and VOC is each less than ten tons per year.

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The uncontrolled PTEs for PM10 are 0.72 lb/hr* and 3.13 tons/yr. The uncontrolled PTEs for VOCs are 0.52 lb/hr* and 2.27 tons/yr.

* using AP-42, Section 1.4, Table 1.4-2 (revised 7/98) emission factors

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 All emissions of particulate matter are PM10.

2.e The potential to emit for emissions of particulate matter from this emissions unit (See A.2.a) is less than the emission limitation pursuant to this rule.

B. Operational Restrictions

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

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 permit to install for emission units B001, B002, J001, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The

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predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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: n-Hexane
TLV (mg/m3): 176.24
Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 38.31
MAGLC (ug/m3): 4,196

Pollutant: Acetaldehyde
TLV (mg/m^3): 45
Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
MAGLC (ug/m^3): 1071

Pollutant: Methanol
TLV (mg/m^3): 262
Maximum Hourly Emission Rate (lbs/hr): 0.24 (permit total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
MAGLC (ug/m^3): 6238

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.).

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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.

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

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. This emissions unit is subject to the applicable provisions of Subpart Dc of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

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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 Environmental Protection Agency
Northwest District Office
Division of Air Pollution Control
347 North Dunbridge Road
Bowling Green, Ohio 43402

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 on at least one of the following emissions units: B001 and B002.

   b. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which emissions unit B001 or B002, whichever startup occurs first, will be operated, but not later than 180 days after initial startup of emissions units B001 and B002, whichever startup occurs first.

   c. The emission testing shall be conducted to demonstrate compliance with the emission limitations of 0.040 lb NOx/mmBtu and 3.84 lbs CO/hr.

   d. 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.

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

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

a. <u>Emissions Limitations:</u>
0.040 lb NOx/mmBtu and 16.82 tons/yr NOx

<u>Applicable Compliance Method:</u>
Compliance with the 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, Subpart A.

The annual emission limitation was developed by multiplying the lb NOx/mmBtu limitation by the maximum heat input capacity of 96.0 mmBtu/hr, the maximum operating schedule of 8760 hours/year, and then applying the conversion factor of 2000 lb/ton. 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:
3.84 lbs CO/hr and 16.82 tons/yr 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, Subpart A.

The annual emission limitation was developed by multiplying the hourly CO 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.

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

Applicable Compliance Method:
The potential to emit for this emissions unit is 0.72 lb PM10/hour and was determined 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 96 mmBtu/hr, and then dividing by the heating value of 1020 mmBtu/mm scf. All emissions of particulate matter are PM10.

If required, the permittee shall demonstrate compliance with the emission limitation above pursuant to OAC rule 3745-17-03(B)(10).

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

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) - paved roadways and parking areas

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	There shall be no visible particulate emissions (PE), except for one minute during any 60-minute period. Fugitive PE shall not exceed 22.09 tons per year. The permittee shall implement best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.b through A.2.f).
OAC rule 3745-17-07(B)	See Section A.2.g.
OAC rule 3745-17-08(B)	See Section A.2.h.
ORC 3704.03(T)(4)	See Section A.2.i.

2. Additional Terms and Conditions

2.a The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

Paved Roadways:

all paved road segments

Paved Parking Areas:

all paved parking areas

2.b The permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permit application, the permittee has committed to treat the paved roadways and

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parking areas by sweeping and/or watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.

2.c The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

2.d The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

2.e Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

2.f Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.

2.g 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.h 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.i This emission unit's potential to emit for particulate matter equal to or less than 10 microns in size (PM10) 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 this emissions unit is 4.29 tons/yr of PM10 based upon the calculations in USEPA, AP-42, Section 13.2.1.3 (revised 11/06).

B. Operational Restrictions

None.

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C. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of the paved roadways and parking areas in accordance with the following frequencies:

Paved Roadways	Minimum Inspection Frequency
All	Once Per Day

Paved Parking Areas	Minimum Inspection Frequency
All	Once Per Day

2. The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

3. The permittee shall maintain records of the following information:

   a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

   b. the date and time of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

   c. the dates the control measures were implemented; and

   d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

   The information required in Section C.3.d shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

4. The permittee shall record the number of trucks hauling grain, ethanol, denaturant, germ, fiber and CPC and their respective weights on a daily basis.

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D. Reporting Requirements

1. The permittee shall submit deviation reports that identify any of the following occurrences:

   a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

   b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

2. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

3. The permittee shall submit annual reports which specify the total for PE emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

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:
   There shall be no visible PE, except for one minute during any 60-minute period.

   Applicable Compliance Method:
   If required, visible PE shall be determined in accordance with test Method 22 of 40 CFR Part 60, Subpart A.

   b. Emission Limitation:
   Fugitive PE shall not exceed 22.09 tons/year.

   Applicable Compliance Method:
   The annual emission limitation was developed using the calculations in USEPA, AP-42 Section 13.2.1.3 (revised 11/06) and inputs representing the potential to emit, as follows:

   $E = k[(sL/2)0.65 (W/3)1.5-C] (1-P/4N)$

   Where

   E = emission factor (lb/VMT)
   k = particle size multiplier = 0.082
   sL = silt content of road surface material, in g/m2 = 0.6

W = mean vehicle weight, in tons = 29.0
C = emission factor for exhaust, brake wear and tire wear = 0.0005
P = number of wet days per averaging period with at least 0.01 inch of precipitation = 140
N = number of days per averaging period = 365

Using the equation and input values above:

E = 1.03 lb PE/vehicle mile traveled (VMT)

Using the AP-42 emission factor and the maximum annual VMT*:
PE = (1.03 lb/VMT)(42,900 VMT/yr)(ton/2000 lb)
= 22.09 tons/year

VMT =the number of trucks entering the plant site x 1.00 mile/truck (miles traveled per truck as specified in the permit application)

Compliance shall be demonstrated by the reporting requirement in Section D.3 above.

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 operation

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compound (VOC) emissions shall not exceed 5.91 tons per year. 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.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.4.

2. Additional Terms and Conditions

2.a This permit to install 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 This emissions units potential to emit (PTE) for carbon monoxide (CO) and nitrogen oxides (NOx) is each less than 10 tons per year**. Therefore, pursuant to ORC 3701.03(T)(4), OAC rule 3745-31-05(A)(3) is not applicable.

**The PTE for CO of 4.06 tons/yr was calculated by multiplying the manufacturer supplied emission rate of 0.129 pound of CO per 1000 gallons loaded, by the maximum annual ethanol throughput rate of 63 million gallons and applying the conversion factor of one ton per 2000 pounds.

**The PTE for NOx of 2.43 tons/yr was calculated by multiplying the manufacturer supplied emission rate of 0.077 pound of NOx per 1000 gallons

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loaded, by the maximum annual ethanol throughput rate of 63 million gallons and applying the conversion factor of one ton per 2000 pounds.

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

2.d During any transfer of material through the loading rack, the vapors displaced from the delivery vessel shall be colleted 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 utilized 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 permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with the requirements established pursuant to OAC rule 3745-21-07(E) in this PTI.

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 throughput rate of denatured ethanol for this emissions unit shall not exceed 63 million gallons per year.

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

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thermocouple or any other equivalent device to detect the presence of the pilot flame;

c. the net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of OAC rule 3745-21-10, 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 OAC rule 3745-21-10, less than 60 feet per second; and,

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

C. Monitoring and/or Recordkeeping 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.

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

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2. The permittee shall maintain monthly records of the amount of denatured ethanol loaded in this emissions unit (in gallons per month and total gallons, to date for the calendar year).

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, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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: n-Hexane
   TLV (mg/m3): 176.24
   Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 38.31
   MAGLC (ug/m3): 4,196

   Pollutant: Acetaldehyde
   TLV (mg/m^3): 45
   Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
   MAGLC (ug/m^3): 1071

   Pollutant: Methanol
   TLV (mg/m^3): 262
   Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
   MAGLC (ug/m^3): 6238

   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:

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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 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:

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

b. periods of time when the closed vent system 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. The quarterly 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 permit shall submit annual reports that summarize the total amount of denatured ethanol loaded, 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.

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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 5.91 tons/yr.

Applicable Compliance Method: The annual limitation represents the PTE for this emissions unit. The PTE for VOC for this emissions unit was calculated by multiplying an emission factor of 9.38 pounds of VOC per 1000 gallons of denatured ethanol [as determined through methodology in AP-42, section 5.2.2, (revised 1/95) in conjunction with the information submitted by the permittee in the PTI application for this permit] by the maximum annual throughput of 63 millions gallons, applying the 98% control efficiency and the conversion factor of 2000 lb/ton.

F. Miscellaneous Requirements

1. If required, compliance with the net heating value of the gas being combusted in the flare (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 (less than 60 feet per second) shall be determined by the method specified in paragraph (P)(3) of OAC rule 3745-21-10.

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 cleaning, conveying and storage

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 0.005 grain per dry standard cubic foot (gr/dscf) and 1.50 tons per year. Visible particulate emissions (PE) from the stack(s) serving this emissions unit 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 This permit to install (PTI) takes into account the use of a baghouse system whenever this air contaminant source is in operation, with a maximum outlet concentration of 0.005 gr/dscf of PM10, 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. grain handling baghouse stack (EP-3); and
ii. process belt conveyor stack (EP-4).

2.b The uncontrolled mass rate of particulate emissions from this emissions unit cannot be ascertained. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. Also, Table 1 does not apply because the facility is located in Mercer County.

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2.c This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because OAC rule 3745-17-11 is not applicable.

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 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 651,331 bushels; therefore, 40 CFR Part 60, Subpart DD, is not applicable.

2.e 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) (stacks EP-3 and EP-4) 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.

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 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:

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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 following the outlet concentration of 0.005 gr/dscf for grain handling baghouse stack (EP-3).

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. 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 Limitations*:*
0.005 grain PM10/dscf, 1.50 tons/yr PM10

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Applicable Compliance Method:
Compliance with the outlet concentration of 0.005 gr PM10/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 (0.005 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (8,000 cfm*) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.005 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 EP-3 (7,000 dscfm), and EP-4 (1,000 dscfm).

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

Applicable Compliance Method:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

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 - (P002) - germ and fiber production operations (steeping and degerminating)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NOx) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.17 pounds per hour (lbs/hr) and 31.40 tons per year. Carbon monoxide (CO) emissions from P002, P003, P005, P008, P013 and P014, combined, shall not exceed 12.89 lbs/hr and 56.46 tons/yr. Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.60 lbs/hr and 33.29 tons/yr (See Section A.2.c). Volatile organic compound (VOC) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 9.13 lbs/hr and 39.99 tons/yr. Sulfur dioxide (SO2) emissions from emissions unit P002, P003, P005, P008, P013 and P014, combined shall not exceed 6.91 lbs/hr and 30.27 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average. See Sections A.2.a.
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.d.

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-11(B)	See Section A.2.d.
OAC rule 3745-18-06(E)(2)	See Section A.2.d.
OAC rule 3745-21-08(B)	See Section A.2.e.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.2.

2. Additional Terms and Conditions

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

i. a regenerative thermal oxidizer (RTO). The RTO shall meet a minimum control efficiency of 90% for CO, 98% for VOC and 70% for PE*; and

ii. firing of 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 7.6 lbs/hr from the RTO.

2.b The annual allowable emission rate is based on the annual production of 60 million gallons of 200-proof ethanol (63.0 million gallons of 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 denatured ethanol produced is in the terms and conditions of emissions unit J001.

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 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,

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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.f This emissions unit includes the following air contaminant sources: soak tank (EU010), wet grind mill #1 (EU013), wet grind mill #2 (EU014), hydroclone #1 (EU015), hydroclone #2 (EU016), germ wash screen & press (EU017), liquefaction tank (EU019), fiber wash screen and centrifuge (EU018), slurry tank (EU011).

B. Operational Restrictions

None

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(s) 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(s) 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(s) 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.

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The average combustion temperature within the thermal oxidizer(s), 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 permit to install for emission units J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
MAGLC (ug/m^3): 1071

Pollutant: Hexane
TLV (mg/m^3): 176.24
Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
MAGLC (ug/m^3): 4,196

Pollutant: Methanol
TLV (mg/m^3): 262
Maximum Hourly Emission Rate (lbs/hr): 0.24 (permit total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
MAGLC (ug/m^3): 6238

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.

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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 reports that identify the following information concerning the operation of the control equipment (thermal oxidizer(s)) during the operation of this emissions unit:

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a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer(s), 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

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.

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, PM10 and SO2 mass emission limitations for 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 SO2, Methods 1-4 and 6 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

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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 (acetaldehyde, hexane, formaldehyde, methanol, acrolein, toulene, xylenes), 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 efficiency is 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(s) shall be conducted while emissions units P002, P003, P005, P008, P013, and P014 are operating at their maximum capacities (as stated in the PTI application for this permit), unless otherwise specified or approved by the Ohio EPA, NWDO.

f. During emission testing, the permittee shall also record the average combustion temperature within the thermal oxidizer(s), in degrees Fahrenheit.

g. 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:
7.17 lbs NOx/hr, 31.40 tons/yr NOx (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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 hourly emission limitation by the maximum operating schedule of 8760 hours/year, and then applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

b. Emission Limitations:
12.89 lbs CO/hr, 56.46 tons/yr CO (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

c. Emission Limitations:
7.60 lb PM10, 33.29 tons/yr PM10 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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.

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

d. Emission Limitations:
9.13 lbs VOC/hr, 39.99 tons/yr VOC (combined, for emissions unit P002, P003, P005, P008, P013 and P014)

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Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

e. Emission Limitations:
6.91 lbs SO2/hr, 30.27 tons/yr SO2 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 6 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

f. Emission Limitation:
Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

Appliance Compliance Method:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

g. Emission Limitations:
The RTO shall meet a minimum control efficiency of 90% for CO and 98% for VOC emissions.

Applicable Compliance Method:
Compliance with the VOC control efficiency requirement above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in Section E.1 of this permit. Complinace 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 -(P003) - germ dryer (13.18 mmBtu/hr natural gas fired dryer)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NOx) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.17 pounds per hour (lbs/hr) and 31.40 tons per year. Carbon monoxide (CO) emissions from P002, P003, P005, P008, P013 and P014, combined, shall not exceed 12.89 lbs/hr and 56.46 tons/yr. Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.60 lbs/hr and 33.29 tons/yr (See Section A.2.c). Volatile organic compound (VOC) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 9.13 lbs/hr and 39.99 tons/yr. Sulfur dioxide (SO2) emissions from emissions unit P002, P003, P005, P008, P013 and P014, combined shall not exceed 6.91 lbs/hr and 30.27 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average. See Section A.2.a.
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.d.

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-11(B)	See Section A.2.d.
OAC rule 3745-18-06(E)	See Section A.2.d.
OAC rule 3745-21-08(B)	See Section A.2.e.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.2.

2. Additional Terms and Conditions

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

i. a regenerative thermal oxidizer (RTO). The RTO shall meet a minimum control efficiency of 90% for CO, 98% for VOC and 70% for PE*; and

ii. firing of 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 7.6 lbs/hr from the RTO.

2.b The annual allowable emission rate is based on the annual production of 60 million gallons of 200-proof ethanol (63.0 million gallons of 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 denatured ethanol produced is in the terms and conditions of emissions unit J001.

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 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,

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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

None

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(s) 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(s) 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(s) 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 oxidizer(s), 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.

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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 permit to install for emission units J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
Maximum Hourly Emission Rate (lbs/hr): 1.67 (permit total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
MAGLC (ug/m^3): 1071

Pollutant: Hexane
TLV (mg/m^3): 176.24
Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
MAGLC (ug/m^3): 4,196

Pollutant: Methanol
TLV (mg/m^3): 262
Maximum Hourly Emission Rate (lbs/hr): 0.24 (permit total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
MAGLC (ug/m^3): 6238

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

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"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 reports that identify the following information concerning the operation of the control equipment (thermal oxidizer(s)) during the operation of this emissions unit:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer(s), 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.

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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

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.

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, PM10 and SO2 mass emission limitations for 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 SO2, Methods 1-4 and 6 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 (acetaldehyde, hexane, formaldehyde, methanol, acrolein, toulene, xylenes), 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 efficiency is 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 VOC emissions.

e. The test(s) shall be conducted while emissions units P002, P003, P005, P008, P013, and P014 are operating at their maximum capacities (as stated in the PTI application for this permit), unless otherwise specified or approved by the Ohio EPA, NWDO.

f. During emission testing, the permittee shall also record the average combustion temperature within the thermal oxidizer(s), in degrees Fahrenheit.

g. 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:
7.17 lbs NOx/hr, 31.40 tons/yr NOx (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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.

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

b. Emission Limitations:
12.89 lbs CO/hr, 56.46 tons/yr CO (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

c. Emission Limitations:
7.60 lb PM10, 33.29 tons/yr PM10 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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.

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

d. Emission Limitations:
9.13 lbs VOC/hr, 39.99 tons/yr VOC (combined, for emissions unit P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

e. Emission Limitations:
6.91 lbs SO2/hr, 30.27 tons/yr SO2 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 6 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

f. Emission Limitation:
Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

Appliance Compliance Method:

If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

g. Emission Limitations:
The RTO shall meet a minimum control efficiency of 90% for CO and 98% for VOC emissions.

Applicable Compliance Method:
Compliance with the VOC control efficiency requirement above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in Section E.1 of this permit. Complinace 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 -(P004) - germ cooler and storage

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compound (VOC) emissions shall not exceed 0.50 pounds per hour (lbs/hr) and 2.19 tons per year. Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.005 grains per dry standard cubic foot (gr/dscf) and 3.65 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 0% opacity as a six-minute average. See Sections A.2.a and A.2.c.
OAC rule 3745-17-11(B)	See Sections A.2.b.
OAC rule 3745-17-07(A)	See Sections A.2.b.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.2.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system whenever this air contaminant source is in operation, with a maximum outlet concentration of 0.005 gr/dscf of PM10, 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. germ cooler baghouse stack (EP-6); and
ii. germ storage baghouse stack (EP-10).

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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) (stacks EP-6 and EP-10) 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 J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
   Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
   MAGLC (ug/m^3): 1071.43

   Pollutant: Methanol
   TLV (mg/m^3): 262
   Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3):1.95
   MAGLC (ug/m^3): 6238

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Pollutant: Hexane
TLV (mg/m^3): 176.24
Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
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.);

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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 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 baghouse outlet concentration of 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

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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*:*
0.50 lb VOC/hr, 2.19 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

b. Emission Limitations*:*
0.005 grain PM10/dscf, 3.65 tons/yr PM10

Applicable Compliance Method:
Compliance with the grain loading of 0.005 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:

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PM10 (tons/yr) = baghouse grain loading (0.005 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (19,445 cfm*) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.005 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 EP-6 (17,445 dscfm), and EP-10 (2,000 dscfm).

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:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

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) - fiber dryer (27.28 mmBtu/hr natural gas fired dryer)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NOx) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.17 pounds per hour (lbs/hr) and 31.40 tons per year. Carbon monoxide (CO) emissions from P002, P003, P005, P008, P013 and P014, combined, shall not exceed 12.89 lbs/hr and 56.46 tons/yr. Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.60 lbs/hr and 33.29 tons/yr (See Section A.2.c). Volatile organic compound (VOC) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 9.13 lbs/hr and 39.99 tons/yr. Sulfur dioxide (SO2) emissions from emissions unit P002, P003, P005, P008, P013 and P014, combined shall not exceed 6.91 lbs/hr and 30.27 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average. See Section A.2.a.
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.d.

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-11(B)	See Section A.2.d.
OAC rule 3745-18-06(E)	See Section A.2.d.
OAC rule 3745-21-08(B)	See Section A.2.e.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.2.

2. Additional Terms and Conditions

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

i. a regenerative thermal oxidizer (RTO). The RTO shall meet a minimum control efficiency of 90% for CO, 98% for VOC and 70% for PE*; and

ii. firing of 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 7.6 lbs/hr from the RTO.

2.b The annual allowable emission rate is based on the annual production of 60 million gallons of 200-proof ethanol (63.0 million gallons of 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 denatured ethanol produced is in the terms and conditions of emissions unit J001.

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 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,

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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

None

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(s) 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(s) 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(s) 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 oxidizer(s), 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.

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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 permit to install for emission units J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
MAGLC (ug/m^3): 1071.43

Pollutant: Hexane
TLV (mg/m^3): 176.24
Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
MAGLC (ug/m^3): 4,196

Pollutant: Methanol
TLV (mg/m^3): 262
Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
MAGLC (ug/m^3): 6238

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

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"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 reports that identify the following information concerning the operation of the control equipment (thermal oxidizer(s)) during the operation of this emissions unit:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer(s), 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.

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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

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.

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, PM10 and SO2 mass emission limitations for 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 SO2, Methods 1-4 and 6 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 (acetaldehyde, hexane, formaldehyde, methanol, acrolein, toulene, xylenes), 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 efficiency is 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 VOC emissions.

e. The test(s) shall be conducted while emissions units P002, P003, P005, P008, P013, and P014 are operating at their maximum capacities (as stated in the PTI application for this permit), unless otherwise specified or approved by the Ohio EPA, NWDO.

f. During emission testing, the permittee shall also record the average combustion temperature within the thermal oxidizer(s), in degrees Fahrenheit.

g. 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:
7.17 lbs NOx/hr, 31.40 tons/yr NOx (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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.

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

b. Emission Limitations:
12.89 lbs CO/hr, 56.46 tons/yr CO (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

c. Emission Limitations:
7.60 lb PM10, 33.29 tons/yr PM10 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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.

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

d. Emission Limitations:
9.13 lbs VOC/hr, 39.99 tons/yr VOC (combined, for emissions unit P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

e. Emission Limitations:
6.91 lbs SO2/hr, 30.27 tons/yr SO2 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 6 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

f. Emission Limitation:
Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

Appliance Compliance Method:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

g. Emission Limitations:
The RTO shall meet a minimum control efficiency of 90% for CO and 98% for VOC emissions.

Applicable Compliance Method:
Compliance with the VOC control efficiency requirement above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in Section E.1 of this permit. Complinace 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 - (P006) - fiber cooler

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compound (VOC) emissions shall not exceed 0.36 pound per hour (lbs/hr) and 1.58 tons per year. Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.005 grain per dry standard cubic foot (gr/dscf) and 2.37 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 0% opacity, as a six-minute average. See Sections A.2.a and A.2.c.
OAC rule 3745-17-11(B)	See Sections A.2.b.
OAC rule 3745-17-07(A)	See Sections A.2.b.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.2.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system whenever this air contaminant source is in operation, with a maximum outlet concentration of 0.005 gr/dscf of PM10, 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 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.

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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) (stacks EP-6 and EP-10) 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 J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
   Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
   MAGLC (ug/m^3): 1071

   Pollutant: Hexane
   TLV (mg/m^3): 176.24
   Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
   MAGLC (ug/m^3): 4,196

   Pollutant: Methanol
   TLV (mg/m^3): 262
   Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3):1.95
   MAGLC (ug/m^3): 6238

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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.

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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 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 baghouse outlet concentration of PM10 and the mass emission limitation for VOC.

   c. The following test methods shall be employed to demonstrate compliance with the above emissions 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 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*:*
0.36 lb VOC/hr, 1.58 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

b. Emission Limitations*:*
0.005 grain PM10/dscf, 2.37 tons/yr PM10

Applicable Compliance Method:
Compliance with the grain loading of 0.005 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 (0.005 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (12,640 CFM) x 60 min/hour x 8760 hours/yr x ton/2000lbs

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Therefore, as long as compliance with the 0.005 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 shall not exceed 0% opacity, as a -minute average from the stack(s) serving this emissions unit

Applicable Compliance Method:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

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) - fiber mill and storage

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 0.005 grain per dry standard cubic foot (gr/dscf) and 1.45 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 0% opacity, as a six-minute average. See Sections A.2.a and A.2.c.
OAC rule 3745-17-11(B)	See Sections A.2.b.
OAC rule 3745-17-07(A)	See Sections A.2.b.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system whenever this air contaminant source is in operation, with a maximum outlet concentration of 0.005 gr/dscf of PM10, 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. fiber hammer mill baghouse stack (EP-12); and
ii. fiber storage baghouse stack (EP-11).

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.

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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) (stacks EP-11 and EP-12) 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.

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 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 baghouse outlet concentration of PM10.

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

      i. for PM10, 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.

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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 Limitations*:*
0.005 grain PM10/dscf, 1.45 tons/yr PM10

Applicable Compliance Method:
Compliance with the grain loading of 0.005 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 (0.005 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (7,544 cfm*) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.005 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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*The maximum flow rate is the combined flow from stacks EP-12 (5,544 dscfm), and EP-11 (2,000 dscfm).

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:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

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) - CPC dryer (50.97 mmBtu/hr natural gas fired dryer)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NOx) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.17 pounds per hour (lbs/hr) and 31.40 tons per year. Carbon monoxide (CO) emissions from P002, P003, P005, P008, P013 and P014, combined, shall not exceed 12.89 lbs/hr and 56.46 tons/yr. Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.60 lbs/hr and 33.29 tons/yr (See Section A.2.c). Volatile organic compound (VOC) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 9.13 lbs/hr and 39.99 tons/yr. Sulfur dioxide (SO2) emissions from emissions unit P002, P003, P005, P008, P013 and P014, combined shall not exceed 6.91 lbs/hr and 30.27 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average. See Section A.2.a.
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.d.

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-11(B)	See Section A.2.d.
OAC rule 3745-18-06(E)	See Section A.2.d.
OAC rule 3745-21-08(B)	See Section A.2.e.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.2.

2. Additional Terms and Conditions

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

i. a regenerative thermal oxidizer (RTO). The RTO shall meet a minimum control efficiency of 90% for CO, 98% for VOC and 70% for PE*; and

ii. firing of 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 7.6 lbs/hr from the RTO.

2.b The annual allowable emission rate is based on the annual production of 60 million gallons of 200-proof ethanol (63.0 million gallons of 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 denatured ethanol produced is in the terms and conditions of emissions unit J001.

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 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,

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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. Any wetcake generated by a malfunction or process upset shall be removed from the facility within 48 hours.

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(s) 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(s) 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(s) 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 oxidizer(s), 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.

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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 permit to install for emission units J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
   Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
   MAGLC (ug/m^3): 1071

   Pollutant: Hexane
   TLV (mg/m^3): 176.24
   Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
   MAGLC (ug/m^3): 4,196

   Pollutant: Methanol
   TLV (mg/m^3): 262
   Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
   MAGLC (ug/m^3): 6238

   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

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"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 reports that identify the following information concerning the operation of the control equipment (thermal oxidizer(s)) during the operation of this emissions unit:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer(s), 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.

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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

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.

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, PM10 and SO2 mass emission limitations for 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 SO2, Methods 1-4 and 6 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 (acetaldehyde, hexane, formaldehyde, methanol, acrolein, toulene, xylenes), 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 efficiency is 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 VOC emissions.

e. The test(s) shall be conducted while emissions units P002, P003, P005, P008, P013, and P014 are operating at their maximum capacities (as stated in the PTI application for this permit), unless otherwise specified or approved by the Ohio EPA, NWDO.

f. During emission testing, the permittee shall also record the average combustion temperature within the thermal oxidizer(s), in degrees Fahrenheit.

g. 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:
7.17 lbs NOx/hr, 31.40 tons/yr NOx (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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.

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

b. Emission Limitations:
12.89 lbs CO/hr, 56.46 tons/yr CO (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

c. Emission Limitations:
7.60 lb PM10, 33.29 tons/yr PM10 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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.

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

d. Emission Limitations:
9.13 lbs VOC/hr, 39.99 tons/yr VOC (combined, for emissions unit P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

e. Emission Limitations:
6.91 lbs SO2/hr, 30.27 tons/yr SO2 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 6 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

f. Emission Limitation:
Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

Appliance Compliance Method:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

g. Emission Limitations:
The RTO shall meet a minimum control efficiency of 90% for CO and 98% for VOC emissions.

Applicable Compliance Method:
Compliance with the VOC control efficiency requirement above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in Section E.1 of this permit. Complinace 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 - (P009) - CPC cooler and storage

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compound (VOC) emissions shall not exceed 1.80 pounds per hour (lbs/hr) and 7.88 tons per year. Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.005 grain per dry standard cubic foot (gr/dscf) and 3.00 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 0% opacity, as a six-minute average. See Sections A.2.a and A.2.c.
OAC rule 3745-17-11(B)	See Sections A.2.b.
OAC rule 3745-17-07(A)	See Sections A.2.b.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.2.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system whenever this air contaminant source is in operation, with a maximum outlet concentration of 0.005 gr/dscf of PM10, 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. CPC cooler baghouse stack (EP-8); and
ii. CPC storage baghouse stack (EP-13).

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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) (stacks EP-6 and EP-10) 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 J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
   Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
   MAGLC (ug/m^3): 1071

   Pollutant: Hexane
   TLV (mg/m^3): 176.24
   Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
   MAGLC (ug/m^3): 4,196

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Pollutant: Methanol
TLV (mg/m^3): 262
Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3):1.95
MAGLC (ug/m^3): 6238

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.);

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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 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 baghouse outlet concentration of PM10 and the mass emission limitation for VOC.

   c. The following test methods shall be employed to demonstrate compliance with the above emissions 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

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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*:*
1.80 lbs VOC/hr, 7.88 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

b. Emission Limitations*:*
0.005 grain PM10/dscf, 3.00 tons/yr PM10

Applicable Compliance Method:
Compliance with the grain loading of 0.005 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:

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PM10 (tons/yr) = baghouse grain loading (0.005 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (15,962 cfm*) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.005 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 EP-8 (13,962 dscfm), and EP-13 (2,000 dscfm).

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:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

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) - pre-fermentation tank

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compound (VOC) emissions from this emissions units shall not exceed 0.90 pound per hour (lbs/hr) and 3.94 tons per year. See Section A.2.a.
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 3745-114-01 ORC 3704.03(F)	See C.2.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a wet scrubber whenever this air contaminant source is in operation, with a minimum control efficiency of 98.5% 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 The annual allowable emission rate is based on the annual production of 60 million gallons of 200-proof ethanol (63 million 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 denatured ethanol produced is in the terms and conditions of emissions unit J001.

B. Operational Restrictions

None

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber(s), in inches of water, and the scrubber(s) 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(s) and the scrubber(s) water flow rate, in gallons per minute, on a once per shift basis.

   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(s) 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(s) 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

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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.

2. The permit to install for emission units J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
   Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
   MAGLC (ug/m^3): 1071

   Pollutant: Hexane
   TLV (mg/m^3): 176.24
   Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
   MAGLC (ug/m^3): 4,196

   Pollutant: Methanol
   TLV (mg/m^3): 262
   Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3):1.95
   MAGLC (ug/m^3): 6238

   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

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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 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(s) was outside of the acceptable range;

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

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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.

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 mass emission limitations for this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitation for VOCs from the scrubber(s) controlling this emissions unit and 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 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

      ii. for HAPs (acetaldehyde, hexane, formaldehyde, methanol, acrolein, toulene, xylenes), 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

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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 the emissions unit is operating at its maximum capacity (as stated in the application for this permit), 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(s), in inches of water; and

ii. the scrubber(s) water flow rate, in gallons/minute.

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>
0.90 lbs VOC/hr, 3.94 tons/yr VOC

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Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall 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 -(P011) - fermentation tanks 1 through 6, yeast tank and beer well

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions from this emissions units shall not exceed 4.41 pounds per hour (lbs/hr) and 19.32 tons per year. See Section A.2.a.
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.

2. Additional Terms and Conditions

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

i. a wet scrubber for VOC control. The scrubber shall meet a minimum control efficiency of 98.5% for VOC emissions.

2.b The annual allowable emission rate is based on the annual production of 60 million gallons of 200-proof ethanol (63 million 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 denatured ethanol produced is in the terms and conditions of emissions unit J001.

B. Operational Restrictions

None

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber(s), in inches of water, and the scrubber(s) 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(s) and the scrubber(s) water flow rate, in gallons per minute, on a once per shift basis.

   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(s) 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(s) 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

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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.

2. The permit to install for emission units J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
   Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
   MAGLC (ug/m^3): 1071

   Pollutant: Hexane
   TLV (mg/m^3): 176.24
   Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
   MAGLC (ug/m^3): 4,196

   Pollutant: Methanol
   TLV (mg/m^3): 262
   Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
   MAGLC (ug/m^3): 6238

   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

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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 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(s) was outside of the acceptable range;

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

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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.

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 mass emission limitations for this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitation for VOCs from the scrubber(s) controlling this emissions unit and 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 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

      ii. for HAPs (acetaldehyde, hexane, formaldehyde, methanol, acrolein, toulene, xylenes), 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

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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 the emissions unit is operating at its maximum capacity (as stated in the application for this permit), 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(s), in inches of water; and

ii. the scrubber(s) water flow rate, in gallons/minute.

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>
4.41 lbs VOC/hr, 19.32 tons/yr VOC

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Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

b. Emissions Limitation
The scrubber shall meet a minimum control efficiency of 98.5% 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.1 of this permit.

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) - distillation operations (beer column, rectifying column and molecular sieve)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compound (VOC) emissions from this emissions units shall not exceed 0.90 pound per hour (lbs/hr) and 3.94 tons per year. See Section A.2.a.
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 3745-114-01 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 wet scrubber whenever this air contaminant source is in operation, with a minimum control efficiency of 98.5% 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 The annual allowable emission rate is based on the annual production of 60 million gallons of 200-proof ethanol (63 million 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 denatured ethanol produced is in the terms and conditions of emissions unit J001.

B. Operational Restrictions

None

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber(s), in inches of water, and the scrubber(s) 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(s) and the scrubber(s) water flow rate, in gallons per minute, on a once per shift basis.

   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(s) 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(s) 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

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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.

2. The permit to install for emission units J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
   Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
   MAGLC (ug/m^3): 1071

   Pollutant: Hexane
   TLV (mg/m^3): 176.24
   Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
   MAGLC (ug/m^3): 4,196

   Pollutant: Methanol
   TLV (mg/m^3): 262
   Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
   MAGLC (ug/m^3): 6238

   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

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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 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(s) was outside of the acceptable range;

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

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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.

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 mass emission limitations for this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitation for VOCs from the scrubber(s) controlling this emissions unit and 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 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

      ii. for HAPs (acetaldehyde, hexane, formaldehyde, methanol, acrolein, toulene, xylenes), 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

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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 the emissions unit is operating at its maximum capacity (as stated in the application for this permit), 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(s), in inches of water; and

ii. the scrubber(s) water flow rate, in gallons/minute.

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:
0.90 lb VOC/hr, 3.94 tons/yr VOC

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Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall 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 -(P013) - CPC production (whole stillage tank, corn protein decanters 1-3, evaporator intermediate tank, finishing evaporator and evaporator syrup tank)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NOx) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.17 pounds per hour (lbs/hr) and 31.40 tons per year. Carbon monoxide (CO) emissions from P002, P003, P005, P008, P013 and P014, combined, shall not exceed 12.89 lbs/hr and 56.46 tons/yr. Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.60 lbs/hr and 33.29 tons/yr (See Section A.2.c). Volatile organic compound (VOC) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 9.13 lbs/hr and 39.99 tons/yr. Sulfur dioxide (SO2) emissions from emissions unit P002, P003, P005, P008, P013 and P014, combined shall not exceed 6.91 lbs/hr and 30.27 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average. See Section A.2.a.
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.

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-07(A)	See Section A.2.d.
OAC rule 3745-17-11(B)	See Section A.2.d.
OAC rule 3745-18-06(E)	See Section A.2.d.
OAC rule 3745-21-08(B)	See Section A.2.e.
OAC rule 3745-114-01 ORC 3704.03(F)	See Section C.2.

2. Additional Terms and Conditions

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

i. a regenerative thermal oxidizer (RTO). The RTO shall meet a minimum control efficiency of 90% for CO, 98% for VOC and 70% for PE*; and

ii. firing of 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 7.6 lbs/hr from the RTO.

2.b The annual allowable emission rate is based on the annual production of 60 million gallons of 200-proof ethanol (63.0 million gallons of 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 denatured ethanol produced is in the terms and conditions of emissions unit J001.

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 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.

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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.f This emissions unit includes the following air contaminant sources: whole stillage tank (EU027), corn protein decanters 1-3 (EU023-EU025), thin stillage tank (EU027), waste heat evaporator (EU028), evaporator intermediate tank (EU029), finishing evaporator (EU030) and evaporator syrup tank (EU031).

B. Operational Restrictions

None

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(s) 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(s) 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(s) 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.

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The average combustion temperature within the thermal oxidizer(s), 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 permit to install for emission units J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
MAGLC (ug/m^3): 1071

Pollutant: Hexane
TLV (mg/m^3): 176.24
Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
MAGLC (ug/m^3): 4,196

Pollutant: Methanol
TLV (mg/m^3): 262
Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
MAGLC (ug/m^3): 6238

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

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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 reports that identify the following information concerning the operation of the control equipment (thermal oxidizer(s)) during the operation of this emissions unit:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer(s), 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

   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.

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, PM10 and SO2 mass emission limitations for 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 SO2, Methods 1-4 and 6 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 (acetaldehyde, hexane, formaldehyde, methanol, acrolein, toulene, xylenes), 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 efficiency is 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(s) shall be conducted while emissions units P002, P003, P005, P008, P013, and P014 are operating at their maximum capacities (as stated in the PTI application for this permit), unless otherwise specified or approved by the Ohio EPA, NWDO.

f. During emission testing, the permittee shall also record the average combustion temperature within the thermal oxidizer(s), in degrees Fahrenheit.

g. 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.

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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:
7.17 lbs NOx/hr, 31.40 tons/yr NOx (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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 hourly emission limitation by the maximum operating schedule of 8760 hours/year, and then applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

b. Emission Limitations:
12.89 lbs CO/hr, 56.46 tons/yr CO (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

c. Emission Limitations:
7.60 lb PM10, 33.29 tons/yr PM10 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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.

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

d. Emission Limitations:
9.13 lbs VOC/hr, 39.99 tons/yr VOC (combined, for emissions unit P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

e. Emission Limitations:
6.91 lbs SO2/hr, 30.27 tons/yr SO2 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 6 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

f. Emission Limitation:
Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

Appliance Compliance Method:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

g. Emission Limitations:
The RTO shall meet a minimum control efficiency of 90% for CO and 98% for VOC emissions.

Applicable Compliance Method:
Compliance with the VOC control efficiency requirement above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in Section E.1 of this permit. Complinace with the CO

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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 - (P014) - methanator

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NOx) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.17 pounds per hour (lbs/hr) and 31.40 tons per year. Carbon monoxide (CO) emissions from P002, P003, P005, P008, P013 and P014, combined, shall not exceed 12.89 lbs/hr and 56.46 tons/yr. Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 7.60 lbs/hr and 33.29 tons/yr (See Section A.2.c). Volatile organic compound (VOC) emissions from emissions units P002, P003, P005, P008, P013 and P014, combined, shall not exceed 9.13 lbs/hr and 39.99 tons/yr. Sulfur dioxide (SO2) emissions from emissions unit P002, P003, P005, P008, P013 and P014, combined shall not exceed 6.91 lbs/hr and 30.27 tons/yr. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 5% opacity ,as a six-minute average. Emissions exhausted through the flare shall not exceed: 0.52 ton/yr CO 0.10 ton/yr NOx 1.96 ton/yr VOC

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	See Section A.2.a. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08(B), 3745-21-09(DD) and 40 CFR Part 60. Subpart VV.
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.d.
OAC rule 3745-17-11(B)	See Section A.2.d.
OAC rule 3745-18-06(E)	See Section A.2.d.
OAC rule 3745-21-08(B)	See Section A.2.e.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.3.

2. Additional Terms and Conditions

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

i. a regenerative thermal oxidizer (RTO). The RTO shall meet a minimum control efficiency of 90% for CO, 98% for VOC and 70% for PE*; and

ii. firing of 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 7.6 lbs/hr from the RTO.

2.b The annual allowable emission rate is based on the annual production of 60 million gallons of 200-proof ethanol (63.0 million gallons of 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 denatured ethanol produced is in the terms and conditions of emissions unit J001.

2.c All emissions of particulate matter are PM10.

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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 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.f The flare shall meet the following requirements:

i. the flare shall be designed for and operated with no visible emissions except for periods not to exceed a total of five minutes during any one hundred twenty consecutive minutes; and

ii. the flare shall be operated with a pilot flame. The pilot flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame.

2.g The flare will only be utilized when the RTO controlling this emissions unit is not in operation. Flare emissions associated with this emissions unit have already been accounted for in potential to emit calculations through the emission limitations associated with the RTO.

B. Operational Restrictions

None

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(s) 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(s) on a continuous basis.

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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(s) 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 oxidizer(s), 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 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:

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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 flare and monitoring equipment.

3. The permit to install for emission units J001, B001, B002, P002, P003, P004, P005, P006, P008, P009, P010, P011, P012, P013 and P014 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 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): 45.0
Maximum Hourly Emission Rate (lbs/hr): 1.67 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 33.0
MAGLC (ug/m^3): 1071

Pollutant: Hexane
TLV (mg/m^3): 176.24
Maximum Hourly Emission Rate (lbs/hr): 1.37 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 38.31
MAGLC (ug/m^3): 4,196

Pollutant: Methanol
TLV (mg/m^3): 262
Maximum Hourly Emission Rate (lbs/hr): 0.24 (project total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.95
MAGLC (ug/m^3): 6238

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

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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.

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D. Reporting Requirements

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

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer(s), 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

   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 annual reports which specify:

   a. the start-up time and shut-down time of the flare associated with this emissions unit and the total down time, the shut-down time and start-up time of this emissions unit; and

   b. any period of time when the flare associated with this emissions unit was operated while the emissions unit was operational.

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, PM10 and SO2 mass emission limitations for this emissions unit.

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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 SO2, Methods 1-4 and 6 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 (acetaldehyde, hexane, formaldehyde, methanol, acrolein, toulene, xylenes), 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 efficiency is 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(s) shall be conducted while emissions units P002, P003, P005, P008, P013, and P014 are operating at their maximum capacities (as stated in the PTI application for this permit), unless otherwise specified or approved by the Ohio EPA, NWDO.

f. During emission testing, the permittee shall also record the average combustion temperature within the thermal oxidizer(s), in degrees Fahrenheit.

g. 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).

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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:
7.17 lbs NOx/hr, 31.40 tons/yr NOx (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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 hourly emission limitation by the maximum operating schedule of 8760 hours/year, and then applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

b. Emission Limitations:
12.89 lbs CO/hr, 56.46 tons/yr CO (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

c. Emission Limitations:
7.60 lb PM10, 33.29 tons/yr PM10 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

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Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above 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.

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

d. Emission Limitations:
9.13 lbs VOC/hr, 39.99 tons/yr VOC (combined, for emissions unit P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

e. Emission Limitations:
6.91 lbs SO2/hr, 30.27 tons/yr SO2 (combined, for emissions units P002, P003, P005, P008, P013 and P014)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitation above shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 6 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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

f. Emission Limitation:
Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

Appliance Compliance Method:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

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g. Emission Limitations:
The RTO shall meet a minimum control efficiency of 90% for CO and 98% for VOC emissions.

Applicable Compliance Method:
Compliance with the VOC control efficiency requirement above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in Section E.1 of this permit. Complinace 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.]

h. Emissions Limitation
0.52 ton CO/year from flare

Applicable Compliance Method
The annual limitation represents the potential to emit for this emissions unit. The PTE for CO for this emissions unit was calculated by multiplying the following:

E = (an emission factor of 0.37 lbs CO/mmBtu [as determined through the methodology in AP-42, Section 13.5-1 (9/91)]) x (3.2 mmBtu/hr) x (year/8760 hours) x (ton/2000 lbs)

i. Emissions Limitation
0.10 ton NO_X/year from flare

Applicable Compliance Method
The annual limitation represents the potential to emit for this emissions unit. The PTE for NO_X for this emissions unit was calculated by multiplying the following:

E = (an emission factor of 0.068 lbs NO_X/mmBtu [as determined through the methodology in AP-42, Section 13.5-1 (9/91)]) x (3.2 mmBtu/hr) x (year/8760 hours) x (ton/2000 lbs)

j. Emissions Limitation
1.96 ton VOC/year from flare

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 the following:

E = (an emission factor of 0.052 lbs VOC/mmBtu [as determined through the methodology in AP-42, Section 13.5-1 (9/91)]) x (3.2 mmBtu/hr) x (year/8760 hours) x (ton/2000 lbs)

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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 -(P015) - 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 1.40 pounds/hour (lbs/hr) and 6.13 tons per year. Visible particulate emissions (PE) shall not exceed 10% 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 takes into account a drift loss factor of 0.005% for this emissions unit, 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 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.

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

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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 1.40 lbs/hr and 6.13 tons/yr.

   Applicable Compliance Methods:
   The hourly allowable emission limitation was developed by multiplying the drift loss factor supplied by the permittee of 0.005 percent drift, by the maximum circulating water flow rate of 1.32 million gallons per hour, by the maximum average total dissolved solids content of the cooling water of 2500 mg/L and applying the conversion factors: 3.79 liter/gallon (L/gal), 60 minutes/hour (min/hr) and 2.2E-06 lb/milligram (lb/mg).

   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 applying the conversion factor of 2000 lb/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

   b. Emission Limitation:
   Visible particulate emissions shall not exceed 0% opacity, as a six-minute average.

   Applicable Compliance Method:
   If required, compliance with the visible emission limitation shall be demonstrated in accordance with Test Method 9 of 40 CFR Part 60, Appendix A.

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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 - (P016) - 25 hp emergency firefighting water pump

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
ORC 3704.03(T)(4)	See A.2.a.
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)(a)	PE shall not exceed 0.310 lb/mmBtu actual heat input. See A.2.e.
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.f.

2. Additional Terms and Conditions

2.a This emission unit's potential to emit (PTE) for PE, particulate matter equal to or less than 10 microns in size (PM10), sulfur dioxide (SO2), nitrogen oxide (NOx), volatile organic compound (VOC), and carbon monoxide (CO) are each less than 10 tons per year. Therefore, pursuant to ORC 3704.03(T)(4), OAC rule 3745-31-05(A)(3) is not applicable.

Potential emissions in tons per year for this emissions unit are as follows: PE - 0.24, PM10 - 0.24, SO2 - 0.22, NOx - 3.39, VOC - 0.27, and CO - 0.73. Potential emissions were calculated by multiplying USEPA, AP42 emission factors (Section 3.3, 10/96) by the maximum capacity of 25 hp, a maximum operating schedule of 8760 hours/year and applying a conversion factor of 0.005 ton/pound.

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

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2.d 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 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 The potential to emit for particulate emissions from this emissions unit (see A.2.a) is less that the allowable emission limitation established pursuant to this rule.

2.f 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.

B. Operational Restrictions

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

C. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than diesel fuel as specified in B.1, the permittee shall maintain a record of the type, quantity and documentation of the sulfur content of fuel burned in this emissions unit.

2. 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.

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D. Reporting Requirements

1. 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

a. Emissions Limitation:
PE shall not exceed 0.310 lb/mmBtu actual heat input.

Applicable Compliance Method:
Compliance with the PE limitation above is assumed since the potential to emit for particulate emissions from this emissions unit is less that the allowable emission limitation of 0.31 lb/mmBtu. The potential to emit is based on the engine manufacturer's specified emission factor of 0.0002 lb PM10/Hp-hr (All PE is PM10) and a brake-specific fuel consumption of 7,000 Btu/Hp-hr (to convert from lb/Hp-hr to lb/mmBtu) resulting in potential PM10 emissions of 0.0286 lb/mmBtu.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

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

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

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 -(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 5.37 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.

2. Additional Terms and Conditions

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

2.b [60.482-1(b)]
Compliance with 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 60.485.

2.c [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 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 60.484.

ii. If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of 60.482-2, 60.482-3,

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

B. Operational Restrictions

1. [60.482-2(a)]
Pumps in light liquid service.

   a. Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 60.485(b), except as provided in 60.482-1(c)) and paragraphs (d), (e), and (f) of this section.

   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.

2. [60.482-2(b)]

   a. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
   b. If there are indications of liquids dripping from the pump seal, a leak is detected.

3. [60.482-2(c)]

   a. 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 60.482-9.

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

4. [60.482-2(d)]
Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a), *Provided* the following requirements are met:

a. Each dual mechanical seal system is --

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

ii. 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 60.482-10; or

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

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

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

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

e. Each sensor as described in paragraph (d)(3) 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.

f. 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 (d)(5)(ii), 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 60.482-9.

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

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5. [60.482-2(e)]
Any pump that is designated, as described in 60.486(e)(1) and (2), for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump:

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

   b. 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 60.485 (c), and

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

6. [60.482-2(f)]
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 60.482-10, it is exempt from paragraphs (a) through (e) of this section.

7. [60.482-2(g)]
Any pump that is designated, as described in 60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section 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 paragraph (a) of this section; 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 otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

8. [60.482-2(h)]
Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

9. [60.482-3(a)] Compressors.
Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 60.482-1(c) and paragraph (h) and (I) of this section.

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10. [60.482-3(b)]
Each compressor seal system as required in paragraph (a) shall be:

    a. Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

    b. Equipped with a barrier fluid system 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 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.

11. [60.482-3(c)]
The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

12. [60.482-3(d)]
Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

13. [60.482-3(e)]
    a. Each sensor as required in paragraph (d) shall be checked daily or shall be equipped with an audible alarm.

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

14. [60.482-3(f)]
If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2), a leak is detected.

15. [60.482-3(g)]
    a. 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 60.482-9.

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

16. [60.482-3(h)]
A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of 60.482-10, except as provided in paragraph (I) of this section.

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17. [60.482-3(l)]
Any compressor that is designated, as described in 60.486(e) (1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a)-(h) if the compressor:

    a. 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 60.485(c); and

    b. Is tested for compliance with paragraph (l)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

18. [60.482-3(j)]
Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of 60.14 or 60.15 is exempt from 60.482(a), (b), (c), (d), (e), and (h), provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

19. [60.482-4(a)] Pressure relief devices in gas/vapor service.
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 60.485 (c).

20. [60.482-4(b)]
    a. 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 60.482-9.

    b. 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 60.485(c).

21. [60.482-4(c)]
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 60.482-10 is exempted from the requirements of paragraphs (a) and (b) of this section.

22. [60.482-4(d)]
    a. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b)

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of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

b. 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 60.482-9.

23. [60.482-5(a)] Sampling connection systems.
Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in 60.482-1(c). Gases displaced during filling of the sample container are not required to be collected or captured.

24. [60.482-5(b)]
Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section:

a. Return the purged process fluid directly to the process line; or

b. Collect and recycle the purged process fluid to a process; or

c. Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of 60.482-10; or

d. Collect, store, and transport the purged process fluid to any of the following systems or facilities:

i. A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

ii. A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

iii. A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

25. [60.482-5(c)]
In situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

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26. [60.482-6(a)] Open-ended valves or lines.

    a. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 60.482-1(c).

    b. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

27. [60.482-6(b)]
    Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

28. [60.482-6(c)]
    When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.

29. [60.482-6(d)]
    Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b) and (c) of this section.

30. [60.482-6(e)]
    Open-ended valves or lines containing materials which would automatically polymerize or would present an explosion, serious over pressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

31. [60.482-7(a)] Valves in gas/vapor service and in light liquid service.
    Each valve shall be monitored monthly to detect leaks by the methods specified in 60.485(b) and shall comply with paragraphs (b) through (e), except as provided in paragraphs (f), (g), and (h), 60.483-1, 2, and 60.482-1(c).

32. [60.482-7(b)]
    If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

33. [60.482-7(c)]
    a. 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.

b. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

34. [60.482-7(d)]
a. 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 60.482-9.

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

35. [60.482-7(e)]
First attempts at repair include, but are not limited to, the following best practices where practicable:

a. Tightening of bonnet bolts;

b. Replacement of bonnet bolts;

c. Tightening of packing gland nuts;

d. Injection of lubricant into lubricated packing.

36. [60.482-7(f)]
Any valve that is designated, as described in 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:

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

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

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

37. [60.482-7(g)]
Any valve that is designated, as described in 60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) if:
a. 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

b. 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.

38. [60.482-7(h)]
Any valve that is designated, as described in 60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:

a. 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.

b. The process unit within which the valve is located either becomes an affected facility through 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

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

39. [60.482-8(a)] Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors.

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:

a. The owner or operator shall monitor the equipment within 5 days by the method specified in 60.485(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

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

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

41. [60.482-8(c)]
a. 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 60.482-9.

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

42. [60.482-8(d)]
First attempts at repair include, but are not limited to, the best practices described under 60.482-7(e).

43. [60.482-9(a)] Delay of repair.

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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.

44. [60.482-9(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.

45. [60.482-9(c)]
Delay of repair for valves will be allowed if:

a. 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

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

46. [60.482-9(d)]
Delay of repair for pumps will be allowed if:

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

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

47. [60.482-9(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.

48. [60.482-10(a)] Closed vent systems and control devices.
Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.

49. [60.482-10(b)]
Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent.

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50. [60.482-10(c)]
Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 ˚C.

51. [60.482-10(d)]
Flares used to comply with this subpart shall comply with the requirements of 60.18.

52. [60.482-10(e)]
Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

53. [60.482-10(f)]
Except as provided in paragraphs (l) through (k) of this section, each closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (f)(2) of this section.

a. If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(l) and (f)(1)(ii) of this section:

i. Conduct an initial inspection according to the procedures in 60.485(b); and

ii. Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

b. If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

i. Conduct an initial inspection according to the procedures in 60.485(b); and

ii. Conduct annual inspections according to the procedures in 60.485(b).

54. [60.482-10(g)]
Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.

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

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b. Repair shall be completed no later than 15 calendar days after the leak is detected.

55. [60.482-10(h)]
Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

56. [60.482-10(I)]
If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (f)(1)(I) and (f)(2) of this section.

57. [60.482-10(j)]
Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(I) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (j)(2) of this section:

a. The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1)(I) or (f)(2) of this section; and

b. The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

58. [60.482-10(k)]
Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(I) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (k)(3) of this section:

a. The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

b. The process unit within which the closed vent system is located becomes an affected facility through 60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

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c. The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

59. [60.482-10(l)]
The owner or operator shall record the information specified in paragraphs (l)(1) through (l)(5) of this section.

a. Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

b. Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

c. For each inspection during which a leak is detected, a record of the information specified in 60.486(c).

d. For each inspection conducted in accordance with 60.485(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

e. For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

60. [60.482-10(m)]
Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

61. [60.483-1(a)] Alternative standards for valves -- allowable percentage of valves leaking.
An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

62. [60.483-1(b)]
The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:

a. 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 60.487(d).

b. 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.

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

63. [60.483-1(c)]
Performance tests shall be conducted in the following manner:

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

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

c. 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.

64. [60.483-1(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.

65. [60.483-2(a)] 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.

b. An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in 60.487(d).

66. [60.483-2(b)]
a. 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 60.482-7.

b. 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.

c. 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.

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d. If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in 60.482-7 but can again elect to use this section.

e. 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.

f. An owner or operator must keep a record of the percent of valves found leaking during each leak detection period.

C. Monitoring and/or Record keeping Requirements

1. [60.486] Record keeping requirements.

   a. Each owner or operator subject to the provisions of this subpart shall comply with the Record keeping requirements of this section.

   b. 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.

2. [60.486(b)]
   When each leak is detected as specified in 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 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.

3. [60.486(c)]
   When each leak is detected as specified in 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.

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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 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.

4. [60.486(d)]
The following information pertaining to the design requirements for closed vent systems and control devices described in 60.482-10 shall be recorded and kept in a readily accessible location:

a. Detailed schematics, design specifications, and piping and instrumentation diagrams.

b. The dates and descriptions of any changes in the design specifications.

c. A description of the parameter or parameters monitored, as required in 60.482-10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

d. Periods when the closed vent systems and control devices required in 60.482-2, 60.482-3, 60.482-4, and 60.482-5 are not operated as designed, including periods when a flare pilot light does not have a flame.

e. Dates of startups and shutdowns of the closed vent systems and control devices required in 60.482-2, 60.482-3, 60.482-4, and 60.482-5.

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5. [60.486(e)]
The following information pertaining to all equipment subject to the requirements in 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. i. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 60.482-2(e), 60.482-3(I) and 60.482-7(f).

      ii. The designation of equipment as subject to the requirements of 60.482-2(e), 60.482-3(I), or 60.482-7(f) shall be signed by the owner or operator.

   c. A list of equipment identification numbers for pressure relief devices required to comply with 60.482-4.

   d. i. The dates of each compliance test as required in 60.482-2(e), 60.482-3(I), 60.482-4, and 60.482-7(f).

      ii. The background level measured during each compliance test.

      iii. The maximum instrument reading measured at the equipment during each compliance test.

   e. A list of identification numbers for equipment in vacuum service.

6. [60.486(f)]
The following information pertaining to all valves subject to the requirements of 60.482-7(g) and (h) and to all pumps subject to the requirements of 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.

   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.

7. [60.486(g)]
The following information shall be recorded for valves complying with 60.483-2:

   a. A schedule of monitoring.

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b. The percent of valves found leaking during each monitoring period.

8. [60.486(h)]
The following information shall be recorded in a log that is kept in a readily accessible location:

a. Design criterion required in 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.

9. [60.486(l)]
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 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.

10. [60.486(j)]
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.

11. [60.486(k)]
The provisions of 60.7(b) and (d) do not apply to affected facilities subject to this subpart.

D. Reporting Requirements

1. [60.487(a)] Reporting requirements.
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.

2. [60.487(b)]
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 60.482-7, excluding those valves designated for no detectable emissions under the provisions of 60.482-7(f).

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c. Number of pumps subject to the requirements of 60.482-2, excluding those pumps designated for no detectable emissions under the provisions of 60.482-2(e) and those pumps complying with 60.482-2(f).

d. Number of compressors subject to the requirements of 60.482-3, excluding those compressors designated for no detectable emissions under the provisions of 60.482-3(I) and those compressors complying with 60.482-3(h).

3. [60.487(c)]
All semiannual reports to the Administrator shall include the following information, summarized from the information in 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 60.482(7)(b) or 60.483-2,

ii. Number of valves for which leaks were not repaired as required in 60.482-7(d)a.,

iii. Number of pumps for which leaks were detected as described in 60.482-2(b) and (d)(6)(I),

iv. Number of pumps for which leaks were not repaired as required in 60.482-2(c)a. and (d)(6)(ii),

v. Number of compressors for which leaks were detected as described in 60.482-3(f),

vi. Number of compressors for which leaks were not repaired as required in 60.482-3(g)a., and

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.

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4. [60.487(d)]
An owner or operator electing to comply with the provisions of 60.483-1 or 60.483-2 shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

5. [60.487(e)]
An owner or operator shall report the results of all performance tests in accordance with 60.8 of the General Provisions. The provisions of 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.

6. [60.487(f)]
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.

E. Testing Requirements

1. [60.485(a)] Test methods and procedures.
In conducting the performance tests required in 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 60.8(b).

2. [60.485(b)]
The owner or operator shall determine compliance with the standards in 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

      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.

3. [60.485(c)]
The owner or operator shall determine compliance with the no detectable emission standards in 60.482-2(e), 60.482-3(l), 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.

4. [60.485(d)]
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 (d)a. and (2) of this section shall be used to resolve the disagreement.

5 [60.485(e)]
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.

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6. [60.485(f)]
Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

7. [60.485(g)]
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:

$$H_T = K \sum_{I=1}^{n} CiHi$$

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

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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 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.

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 5.37 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. [60.484(a)] Equivalence of means of emission limitation.
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.

2. [60.484(b)]
Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:

a. 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.

b. The Administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.

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c. 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.

3. [60.484(c)]
Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:

a. 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.

b. For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.

c. 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.

d. 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.

e. The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4).

f. 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.

4. [60.484(d)]
An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.

5. [60.484(e)]
a. 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.

b. 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.

c. 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.

6. [60.484(f)]
   a. 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.

   b. The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

7. [60.488(a)] Reconstruction.
   For the purposes of this subpart:

   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 60.15: pump seals, nuts and bolts, rupture disks, and packings.

8. [60.488(b)]
   Under 60.15, the "fixed capital cost of new components" includes the fixed capital cost of all depreciable components (except components specified in 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.

9. 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.

10. 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

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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.

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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) - rail and truck grain receiving operations

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Stack Emissions: Particulate matter emissions equal to or less than 10 microns in size (PM10) shall not exceed 0.005 grains per dry standard cubic foot (gr/dscf) and 9.39 tons per year. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 0% opacity, as a 6-minute average. Fugitive Emissions: Fugitive PE shall not exceed 1.13 tons/yr. Fugitive PM10 emissions shall not exceed 0.25 tons/yr. Visible fugitive PE shall not exceed 5% opacity, as a 3-minute average, from any truck or rail unloading. 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(A)	See section A.2.c.
OAC rule 3745-17-07(A)	See section A.2.c.
OAC rule 3745-17-11(B)	See section A.2.d.
40 CFR Part 60, Subpart DD	See section A.2.e.

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 truck grain receiving, partial enclosure with aspiration to a baghouse with an outlet concentration of 0.005 gr/dscf; and

ii. for rail grain receiving, partial enclosure with aspiration to a baghouse with an outlet concentration of 0.005 gr/dscf.

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 651,331 bushels; therefore, 40 CFR Part 60, Subpart DD, is not applicable.

2.f All emissions of particulate matter are PM10.

B. Operational Restrictions

1. The maximum annual corn throughput for this emissions unit shall not exceed 646,800 tons.

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) (stacks EP-1 and EP-2) 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., grain receiving 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 corn per month and total tons of corn, 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 stack(s) 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 (c) 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 corn throughput for this emissions unit, in tons. 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 following:

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i. truck grain receiving baghouse outlet concentration of 0.0050 gr/dscf; and

ii. rail grain receiving baghouse outlet concentration of 0.0050 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. 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:
0.005 gr PM10/dscf of exhaust gas for the truck and rail grain receiving baghouses

Applicable Compliance Method:

Compliance with the grain loading of 0.0050 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,

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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.

b. Emission Limitation:
9.39 tons/yr PM10

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 (0.005 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (50,000 dscfm*) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.005 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 EP-1 (20,000 dscfm) and EP-2 (30,000 dscfm).

b. Emission Limitations:
Fugitive PE shall not exceed 1.13 tons/yr;
Fugitive PM10 shall not exceed 0.25 ton/yr.

Applicable Compliance Method:

The annual emission limitations above were developed by the following calculations using the AP-42 emission factors (Section 9.9.1-1, revised March 2003) and the maximum corn throughput.

= 646,800 ton/yr x 0.035 lb PE/ton x ton/2000 lb x 0.1 (90% control efficiency) = 1.13 tons PE/year

= 646,800 ton/yr x 0.0078 lb PM10/ton x ton/2000 lb x 0.1 (90% control efficiency) = 0.25 tons PM10/year

Therefore, provided compliance is shown with the maximum annual corn throughput, compliance with the annual emission limitations above shall be assumed.

c. Emission Limitation:
Visible PE from the baghouse stack(s) shall not exceed 0% opacity, as a 6-minute average.

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Applicable Compliance Method:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

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:
If required, 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

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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 -(P902) - rail and truck loadout of germ, fiber and CPC

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Stack Emissions: Particulate emissions equal to or less than 10 microns in size (PM10) shall not exceed 0.005 grain per dry standard cubic foot (gr/dscf) and 4.51 tons per year. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 0% opacity, as a 6-minute average. Fugitive Emissions: Fugitive PE shall not exceed 0.04 ton/yr. Fugitive PM10 emissions shall not exceed 0.01 ton/yr. Visible fugitive PE shall not exceed 5% opacity, as a 3-minute average, from any truck or rail unloading. See Sections A.2.a and A.2.f.
OAC rule 3745-17-07(B)	See sections A.2.b.
OAC rule 3745-17-08(A)	See sections A.2.c.
OAC rule 3745-17-07(A)	See sections A.2.e.
OAC rule 3745-17-11(B)	See sections 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 operation, as a voluntary restriction as proposed by the permittee for the purpose

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of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3). The control system consists of the following:

i. for truck loadout, partial enclosure with aspiration to a baghouse with an outlet concentration of 0.005 gr/dscf; and

ii. for rail loadout, partial enclosure with aspiration to a baghouse with an outlet concentration of 0.005 gr/dscf.

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 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 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) (stacks EP-16 and EP-17) 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., grain receiving 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:

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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 stack(s) 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 (c) 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 following:

      i. truck loadout baghouse outlet concentration of 0.0050 gr/dscf; and

      ii. rail loadout baghouse outlet concentration of 0.0050 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. 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

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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:
0.005 gr PM10/dscf of exhaust gas for the truck and rail solids loadout baghouses

Applicable Compliance Method:
Compliance with the grain loading of 0.0050 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.

b. Emission Limitations:
PM10 from the baghouse stack shall not exceed 4.51 tons/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 (0.005 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (24,000 cfm*) x 60 min/hour x 8760 hours/yr x ton/2000lbs

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Therefore, as long as compliance with the 0.005 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 rate from stacks EP-16 (16,000 dscfm) and EP-17 (8,000 dscfm).

b. Emission Limitation:
Fugitive PE shall not exceed 0.04 ton/yr;
Fugitive PM10 shall not exceed 0.01 ton/yr.

Applicable Compliance Method:
The annual emission limitations above were developed by the following calculations using the AP-42 emission factors (Section 9.9.1-1, revised March 2003) and the maximum corn throughput.

219,450 ton/yr x 0.0033 lb PM/ton x ton/2000 lb x 0.1 (90% capture efficiency) = 0.04 tons PE/year

219,450 ton/yr x 0.0008 lbPM10/ton x ton/2000 lb x 0.1 (90% capture efficiency) = 0.01 ton PM10/year

Therefore, provided compliance is shown with the maximum annual corn throughput, compliance with the annual emission limitations above shall be assumed.

c. Emission Limitation:
Visible PE from the baghouse stack(s) shall not exceed 0% opacity, as a 6-minute average.

Applicable Compliance Method:
If required, compliance shall be determined according to test Method 9 of 40 CFR Part 60, Appendix A.

d. Emission Limitation:
Visible fugitive PE shall not exceed 5% opacity, as a 3-minute average, from any truck or rail loading.

Applicable Compliance Method:
If required, 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.

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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 - (T001) - 200-proof ethanol storage tank (90,000 gallon shift 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. See A.2.a.
40 CFR, Part 60, Subpart Kb	See A.2.o.
OAC rule 3745-21-09(L)	See A.2.n.

2. Additional Terms and Conditions

2.a The permit to install takes into account the use of an internal floating roof and a maximum material throughput of 30,000,000 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

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completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

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 30,000,000 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:
0.24 ton/yr 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 30,000,000 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) - 200-proof ethanol storage tank (90,000 gallon shift 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.
40 CFR, Part 60, Subpart Kb	See A.2.o.
OAC rule 3745-21-09(L)	See A.2.n.

2. Additional Terms and Conditions

2.a The permit to install takes into account the use of an internal floating roof and a maximum material throughput of 30,000,000 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 30,000,000 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:

(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 tons/yr 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 30,000,000 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) - denaturant storage tank (90,000 gallon tank)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compounds shall not exceed 1.08 ton per year.
40 CFR, part 60, Subpart Kb	See A.2.b through A.2.m.
OAC rule 3745-21-09(L)	See A.2.n.

2. Additional Terms and Conditions

2.a This permit to install 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 3,000,000 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 resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

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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.

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.

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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 3,000,000 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:

         (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

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

(b) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

iii. For other liquids, the vapor pressure:

(a) May be obtained from standard reference texts, or

(b) Determined by ASTM Method D2879-83 (incorporated by reference--see Sec. 60.17); or

(c) Measured by an appropriate method approved by the Ohio EPA, NWDO; or

(d) Calculated by an appropriate method approved by the Ohio EPA, NWDO.

2. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

3. For vessels equipped with a liquid-mounted or mechanical shoe primary seal, the permittee shall visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Ohio EPA, NWDO in the inspection report required in D.3. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

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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

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

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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:
1.08 tons/yr 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

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by U.S. EPA Tanks 4.0 program with a maximum annual material throughput of 3,000,000 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 - (T004) - 200-proof ethanol storage tank (900,000 gallon tank)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compounds (VOC) shall not exceed 0.20 ton per year.
40 CFR, Part 60, Subpart Kb	See A.2.o.
OAC rule 3745-21-09(L)	See A.2.n.

2. Additional Terms and Conditions

2.a The permit to install takes into account the use of an internal floating roof and a maximum material throughput of 60,000,000 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 60,000,000 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:
0.20 tons/yr 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 60,000,000 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 -(T005) - denatured ethanol storage tank (900,00 gallon 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.
40 CFR, Part 60, Subpart Kb	See A.2.o.
OAC rule 3745-21-09(L)	See A.2.n.

2. Additional Terms and Conditions

2.a The permit to install takes into account the use of an internal floating roof and a maximum material throughput of 63,000,000 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.

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 63,000,000 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:
0.24 tons/yr 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 63,000,000 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 -(T006) - off-spec ethanol storage tank (180,000 gallon tank)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compounds (VOC) shall not exceed 0.07 ton per year.
40 CFR, Part 60, Subpart Kb	See A.2.o.
OAC rule 3745-21-09(L)	See A.2.n.

2. Additional Terms and Conditions

2.a The permit to install takes into account the use of an internal floating roof and a maximum material throughput of 6,000,000 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 6,000,000 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:
0.07 tons/yr 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 6,000,000 gallons.

F. Miscellaneous Requirements

None

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