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
LAWRENCE COUNTY
Application No: 07-00579
Fac ID: 0744000166

DATE: 6/7/2007

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

Buckeye Ethanol, LLC
Jim Wilmers
5856 Leven Links Court
Dublin, OH 43017-9744

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** **PCHD**

Permit To Install **Issue Date: 6/7/2007**
Terms and Conditions **Effective Date: 6/7/2007**

FINAL PERMIT TO INSTALL 07-00579

Application Number: 07-00579
Facility ID: 0744000166
Permit Fee: **$24100**
Name of Facility: Buckeye Ethanol, LLC
Person to Contact: Jim Wilmers
Address: 5856 Leven Links Court
Dublin, OH 43017-9744

Location of proposed air contaminant source(s) [emissions unit(s)]:
0.1 mile E of Old US 52 and 7up Dr
South Point, **Ohio**

Description of proposed emissions unit(s):
118,000,000 gallon per year Dry Mill Ethanol Production Facility.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

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

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

3. Records Retention Requirements

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

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and

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

5. Scheduled Maintenance/Malfunction Reporting

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

6. Permit Transfers

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

7. Air Pollution Nuisance

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

8. Termination of Permit to Install

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

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions

may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

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

10. Public Disclosure

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

11. Applicability

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

12. Best Available Technology

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

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

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this

permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

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

15. Fees

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

B. Permit to Install Summary of Allowable Emissions

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

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

Pollutant	Tons Per Year
NOx	99.83
CO	98.85
VOC	98.09
SO2	66.85
PE	68.71

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

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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) 92.4 mmBtu/hr Natural Gas Fired Boiler No. 1; equipped with low NOx burner

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NO_x) emissions shall not exceed 3.14 lbs/hour. The requirements of this rule also include compliance with OAC rule 3745-31-05(C).
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	NO_x emissions shall not exceed 13.76 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 7.29 tons per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 2.19 tons per rolling, 12-month period.
ORC 3704.03(T)(4)	See section A.2.a below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 lb/mmBtu of actual heat input.
40 CFR Part 60, Subpart Dc	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-10(B)(1).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.b below.
OAC rule 3745-114-01	See sections C.5, C.6 and C.7 below.

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2. Additional Terms and Conditions

2.a The best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled CO, VOC, PE and sulfur dioxide (SO2) emissions from this air contaminant source since the potentials to emit (PTE) for CO, VOC, PE and SO2 is each less than ten tons per year.

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

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

2.c For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

B. Operational Restrictions

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

C. Monitoring and/or Recordkeeping Requirements

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

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

3. The permittee shall maintain annual records of the fuel heat input for the calendar year, in mmBtu.

4. The permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx, and VOC emissions.

5. The permit to install for this emissions unit [B001] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New

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Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.16
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.26
MAGLC (ug/m3): 4,190

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.24
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.82
MAGLC (ug/m3): 42,156

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 0.81
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.22
MAGLC (ug/m3): 42,934

6. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

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

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

7. 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 toxic air 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) meet(s) the definition of a “modification” under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

D. Reporting Requirements

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

2. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

   a. construction date (no later than 30 days after such date);

   b. actual start-up date (within 15 days after such date); and

   d. date of performance testing (if required, at least 30 days prior to testing).

   Reports are to be sent to:

   Portsmouth Local Air Agency
   605 Washington St., 3rd Floor
   Portsmouth, OH 45662

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and

Ohio Environmental Protection Agency
Division of Air Pollution Control
P.O. Box 1049
Columbus, OH 43216-1049

3. The permittee shall submit annual reports which specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

      NO_x emissions shall not exceed 3.14 lbs/hour and 13.76 tons per rolling, 12-month period.

      Applicable Compliance Methods:

      Compliance with the hourly emission limitation may be demonstrated by multiplying the manufacturer supplied emission factor of 0.034 lb of NOx/mmBtu (as verified by the emissions testing specified in section E.2 below) by the maximum heat input rate of 92.4 mmBtu/hr.

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

      The tpy emission limitation was developed by multiplying the short-term allowable NOx emission limitation (3.14 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

   b. Emission Limitation:

      CO emissions shall not exceed 7.29 tons per rolling, 12-month period.

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Applicable Compliance Methods:

Compliance may be demonstrated by multiplying the manufacturer supplied emission factor of 0.018 lb of CO/mmBtu (as verified by the emissions testing specified in section E.2 below) by the maximum heat input rate of 92.4 mmBtu/hr, and by 8760 hrs/yr, and then dividing by 2000 lbs per ton.

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

c. Emission Limitation:

PE shall not exceed 0.020 lb/mmBtu of actual heat input.

Applicable Compliance Methods:

Compliance may be demonstrated based upon the manufacturer supplied emission factor of 0.0074 lb of PE/mmBtu.

If required, compliance shall be determined according to test Methods 1 through 5, total filterable particulate as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources" and Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles.

d. Emission Limitation:

VOC emissions shall not exceed 2.19 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance may be demonstrated by multiplying the manufacturer supplied emission factor of 0.0054 lb of VOC/mmBtu by the maximum heat input rate of 92.4 mmBtu/hr, and by 8760 hrs/yr, and then dividing by 2000 lbs per ton.

If required, compliance shall be determined according to test Methods 1 through 4 and 25 or 25a, as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

e. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

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

2. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

   a. The emission testing shall be conducted on at least one of the following emissions units: B001, B002, B003 or B004.

   b. The emission testing shall be conducted within 180 days after initial startup of either emissions unit B001, B002, B003 or B004, whichever startup occurs first.

   c. The emission testing shall be conducted to verify the NOx and CO emission factors established for these emissions units.

   d. The following test methods shall be employed: for NOx, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A; and for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

   e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

   f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s). The "Intent to Test" notification shall include a proposal for determining the heat input rate of the unit tested.

   g. Personnel from the Portsmouth Local Air Agency 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.

   h. 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 Portsmouth

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Local Air Agency 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 Portsmouth Local Air Agency.

F. Miscellaneous Requirements

1. Construction of the air contaminant sources covered by this permit may not begin until the final, effective National Pollutant Discharge Elimination System (NPDES) permit is issued for this facility. This facility has applied for a NPDES permit which is identified as Ohio NPDES Permit No.: 0IN00259*AD/Federal Application No.: OH0135305.

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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 operation(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) 92.4 mmBtu/hr Natural Gas Fired Boiler No. 2; equipped with low NOx burner

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NO_x) emissions shall not exceed 3.14 lbs/hour. The requirements of this rule also include compliance with OAC rule 3745-31-05(C).
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	NO_x emissions shall not exceed 13.76 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 7.29 tons per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 2.19 tons per rolling, 12-month period.
ORC 3704.03(T)(4)	See section A.2.a below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 lb/mmBtu of actual heat input.
40 CFR Part 60, Subpart Dc	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-10(B)(1).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.b below.
OAC rule 3745-114-01	See sections C.5, C.6 and C.7 below.

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2. Additional Terms and Conditions

2.a The best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled CO, VOC, PE and sulfur dioxide (SO2) emissions from this air contaminant source since the potentials to emit (PTE) for CO, VOC, PE and SO2 is each less than ten tons per year.

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

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

2.c For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

B. Operational Restrictions

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

C. Monitoring and/or Recordkeeping Requirements

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

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

3. The permittee shall maintain annual records of the fuel heat input for the calendar year, in mmBtu.

4. The permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx, and VOC emissions.

5. The permit to install for this emissions unit [B002] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New

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Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.16
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.33
MAGLC (ug/m3): 4,190

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.24
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.92
MAGLC (ug/m3): 42,156

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 0.81
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.58
MAGLC (ug/m3): 42,934

6. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

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

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

7. 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 toxic air 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) meet(s) the definition of a “modification” under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

D. Reporting Requirements

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

2. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

   a. construction date (no later than 30 days after such date);

   b. actual start-up date (within 15 days after such date); and

   d. date of performance testing (if required, at least 30 days prior to testing).

   Reports are to be sent to:

   Portsmouth Local Air Agency
   605 Washington St., 3rd Fl
   Portsmouth, OH 45662

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and

Ohio Environmental Protection Agency
Division of Air Pollution Control
P.O. Box 1049
Columbus, OH 43216-1049

3. The permittee shall submit annual reports which specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

      NO_x emissions shall not exceed 3.14 lbs/hour and 13.76 tons per rolling, 12-month period.

      Applicable Compliance Methods:

      Compliance with the hourly emission limitation may be demonstrated by multiplying the manufacturer supplied emission factor of 0.034 lb of NOx/mmBtu (as verified by the emissions testing specified in section E.2 below) by the maximum heat input rate of 92.4 mmBtu/hr.

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

      The tpy emission limitation was developed by multiplying the short-term allowable NOx emission limitation (3.14 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

   b. Emission Limitation:

      CO emissions shall not exceed 7.29 tons per rolling, 12-month period.

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Applicable Compliance Methods:

Compliance with may be demonstrated by multiplying the manufacturer supplied emission factor of 0.018 lb of CO/mmBtu (as verified by the emissions testing specified in section E.2 below) by the maximum heat input rate of 92.4 mmBtu/hr, and by 8760 hrs/yr, and then dividing by 2000 lbs per ton.

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

c. Emission Limitation:

PE shall not exceed 0.020 lb/mmBtu of actual heat input.

Applicable Compliance Methods:

Compliance may be demonstrated based upon the manufacturer supplied emission factor of 0.0074 lb of PE/mmBtu.

If required, compliance shall be determined according to test Methods 1 through 5, total filterable particulate as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources" and Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles.

d. Emission Limitation:

VOC emissions shall not exceed 2.19 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance may be demonstrated by multiplying the manufacturer supplied emission factor of 0.0054 lb of VOC/mmBtu by the maximum heat input rate of 92.4 mmBtu/hr, and by 8760 hrs/yr, and then dividing by 2000 lbs per ton.

If required, compliance shall be determined according to test Methods 1 through 4 and 25 or 25a, as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

e. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

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Applicable Compliance Method:

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

2. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

   a. The emission testing shall be conducted on at least one of the following emissions units: B001, B002, B003 or B004.

   b. The emission testing shall be conducted within 180 days after initial startup of either emissions unit B001, B002, B003 or B004, whichever startup occurs first.

   c. The emission testing shall be conducted to verify the NOx and CO emission factors established for these emissions units.

   d. The following test methods shall be employed: for NOx, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A; and for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

   e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

   f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s). The "Intent to Test" notification shall include a proposal for determining the heat input rate of the unit tested.

   g. Personnel from the Portsmouth Local Air Agency 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.

   h. 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 Portsmouth

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Local Air Agency 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 Portsmouth Local Air Agency.

F. Miscellaneous Requirements

1. Construction of the air contaminant sources covered by this permit may not begin until the final, effective National Pollutant Discharge Elimination System (NPDES) permit is issued for this facility. This facility has applied for a NPDES permit which is identified as Ohio NPDES Permit No.: 0IN00259*AD/Federal Application No.: OH0135305.

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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 operation(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 - (B003) 92.4 mmBtu/hr Natural Gas Fired Boiler No. 3; equipped with low NOx burner

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NO_x) emissions shall not exceed 3.14 lbs/hour. The requirements of this rule also include compliance with OAC rule 3745-31-05(C).
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	NO_x emissions shall not exceed 13.76 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 7.29 tons per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 2.19 tons per rolling, 12-month period.
ORC 3704.03(T)(4)	See section A.2.a below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 lb/mmBtu of actual heat input.
40 CFR Part 60, Subpart Dc	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-10(B)(1).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.b below.
OAC rule 3745-114-01	See sections C.5, C.6 and C.7 below.

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2. Additional Terms and Conditions

2.a The best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled CO, VOC, PE and sulfur dioxide (SO2) emissions from this air contaminant source since the potentials to emit (PTE) for CO, VOC, PE and SO2 is each less than ten tons per year.

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

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

2.c For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

B. Operational Restrictions

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

C. Monitoring and/or Recordkeeping Requirements

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

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

3. The permittee shall maintain annual records of the fuel heat input for the calendar year, in mmBtu.

4. The permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx, and VOC emissions.

5. The permit to install for this emissions unit [B003] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New

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Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.16
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.37
MAGLC (ug/m3): 4,190

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.24
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.97
MAGLC (ug/m3): 42,156

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 0.81
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.76
MAGLC (ug/m3): 42,934

6. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

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

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

7. 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 toxic air 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) meet(s) the definition of a “modification” under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

D. Reporting Requirements

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

2. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

   a. construction date (no later than 30 days after such date);

   b. actual start-up date (within 15 days after such date); and

   d. date of performance testing (if required, at least 30 days prior to testing).

   Reports are to be sent to:

   Portsmouth Local Air Agency
   605 Washington St., 3rd Fl
   Portsmouth, OH 45662

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and

Ohio Environmental Protection Agency
Division of Air Pollution Control
P.O. Box 1049
Columbus, OH 43216-1049

3. The permittee shall submit annual reports which specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

      NO_x emissions shall not exceed 3.14 lbs/hour and 13.76 tons per rolling, 12-month period.

      Applicable Compliance Methods:

      Compliance with the hourly emission limitation may be demonstrated by multiplying the manufacturer supplied emission factor of 0.034 lb of NOx/mmBtu (as verified by the emissions testing specified in section E.2 below) by the maximum heat input rate of 92.4 mmBtu/hr.

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

      The tpy emission limitation was developed by multiplying the short-term allowable NOx emission limitation (3.14 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

   b. Emission Limitation:

      CO emissions shall not exceed 7.29 tons per rolling, 12-month period.

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Applicable Compliance Methods:

Compliance with may be demonstrated by multiplying the manufacturer supplied emission factor of 0.018 lb of CO/mmBtu (as verified by the emissions testing specified in section E.2 below) by the maximum heat input rate of 92.4 mmBtu/hr, and by 8760 hrs/yr, and then dividing by 2000 lbs per ton.

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

c. Emission Limitation:

PE shall not exceed 0.020 lb/mmBtu of actual heat input.

Applicable Compliance Methods:

Compliance may be demonstrated based upon the manufacturer supplied emission factor of 0.0074 lb of PE/mmBtu.

If required, compliance shall be determined according to test Methods 1 through 5, total filterable particulate as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources" and Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles.

d. Emission Limitation:

VOC emissions shall not exceed 2.19 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance may be demonstrated by multiplying the manufacturer supplied emission factor of 0.0054 lb of VOC/mmBtu by the maximum heat input rate of 92.4 mmBtu/hr, and by 8760 hrs/yr, and then dividing by 2000 lbs per ton.

If required, compliance shall be determined according to test Methods 1 through 4 and 25 or 25a, as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

e. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

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Applicable Compliance Method:

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

2. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

   a. The emission testing shall be conducted on at least one of the following emissions units: B001, B002, B003 or B004.

   b. The emission testing shall be conducted within 180 days after initial startup of either emissions unit B001, B002, B003 or B004, whichever startup occurs first.

   c. The emission testing shall be conducted to verify the NOx and CO emission factors established for these emissions units.

   d. The following test methods shall be employed: for NOx, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A; and for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

   e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

   f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s). The "Intent to Test" notification shall include a proposal for determining the heat input rate of the unit tested.

   g. Personnel from the Portsmouth Local Air Agency 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.

   h. 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 Portsmouth

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Local Air Agency 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 Portsmouth Local Air Agency.

F. Miscellaneous Requirements

1. Construction of the air contaminant sources covered by this permit may not begin until the final, effective National Pollutant Discharge Elimination System (NPDES) permit is issued for this facility. This facility has applied for a NPDES permit which is identified as Ohio NPDES Permit No.: 0IN00259*AD/Federal Application No.: OH0135305.

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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 operation(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 - (B004) 92.4 mmBtu/hr Natural Gas Fired Boiler No. 4; equipped with low NOx burner

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NO_x) emissions shall not exceed 3.14 lbs/hour. The requirements of this rule also include compliance with OAC rule 3745-31-05(C).
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	NO_x emissions shall not exceed 13.76 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 7.29 tons per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 2.19 tons per rolling, 12-month period.
ORC 3704.03(T)(4)	See section A.2.a below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 lb/mmBtu of actual heat input.
40 CFR Part 60, Subpart Dc	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-10(B)(1).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.b below.
OAC rule 3745-114-01	See sections C.5, C.6 and C.7 below.

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2. Additional Terms and Conditions

2.a The best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled CO, VOC, PE and sulfur dioxide (SO2) emissions from this air contaminant source since the potentials to emit (PTE) for CO, VOC, PE and SO2 is each less than ten tons per year.

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

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

2.c For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

B. Operational Restrictions

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

C. Monitoring and/or Recordkeeping Requirements

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

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

3. The permittee shall maintain annual records of the fuel heat input for the calendar year, in mmBtu.

4. The permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx, and VOC emissions.

5. The permit to install for this emissions unit [B004] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New

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Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.16
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.28
MAGLC (ug/m3): 4,190

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.24
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.85
MAGLC (ug/m3): 42,156

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 0.81
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.33
MAGLC (ug/m3): 42,934

6. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

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

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

7. 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 toxic air 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) meet(s) the definition of a “modification” under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

D. Reporting Requirements

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

2. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

   a. construction date (no later than 30 days after such date);

   b. actual start-up date (within 15 days after such date); and

   d. date of performance testing (if required, at least 30 days prior to testing).

   Reports are to be sent to:

   Portsmouth Local Air Agency
   605 Washington St., 3rd Fl
   Portsmouth, OH 45662

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and

Ohio Environmental Protection Agency
Division of Air Pollution Control
P.O. Box 1049
Columbus, OH 43216-1049

3. The permittee shall submit annual reports which specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

      NO_x emissions shall not exceed 3.14 lbs/hour and 13.76 tons per rolling, 12-month period.

      Applicable Compliance Methods:

      Compliance with the hourly emission limitation may be demonstrated by multiplying the manufacturer supplied emission factor of 0.034 lb of NOx/mmBtu (as verified by the emissions testing specified in section E.2 below) by the maximum heat input rate of 92.4 mmBtu/hr.

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

      The tpy emission limitation was developed by multiplying the short-term allowable NOx emission limitation (3.14 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

   b. Emission Limitation:

      CO emissions shall not exceed 7.29 tons per rolling, 12-month period.

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Applicable Compliance Methods:

Compliance with may be demonstrated by multiplying the manufacturer supplied emission factor of 0.018 lb of CO/mmBtu (as verified by the emissions testing specified in section E.2 below) by the maximum heat input rate of 92.4 mmBtu/hr, and by 8760 hrs/yr, and then dividing by 2000 lbs per ton.

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

c. Emission Limitation:

PE shall not exceed 0.020 lb/mmBtu of actual heat input.

Applicable Compliance Methods:

Compliance may be demonstrated based upon the manufacturer supplied emission factor of 0.0074 lb of PE/mmBtu.

If required, compliance shall be determined according to test Methods 1 through 5, total filterable particulate as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources" and Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles.

d. Emission Limitation:

VOC emissions shall not exceed 2.19 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance may be demonstrated by multiplying the manufacturer supplied emission factor of 0.0054 lb of VOC/mmBtu by the maximum heat input rate of 92.4 mmBtu/hr, and by 8760 hrs/yr, and then dividing by 2000 lbs per ton.

If required, compliance shall be determined according to test Methods 1 through 4 and 25 or 25a, as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

e. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

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Applicable Compliance Method:

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

2. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

   a. The emission testing shall be conducted on at least one of the following emissions units: B001, B002, B003 or B004.

   b. The emission testing shall be conducted within 180 days after initial startup of either emissions unit B001, B002, B003 or B004, whichever startup occurs first.

   c. The emission testing shall be conducted to verify the NOx and CO emission factors established for these emissions units.

   d. The following test methods shall be employed: for NOx, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A; and for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

   e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

   f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s). The "Intent to Test" notification shall include a proposal for determining the heat input rate of the unit tested.

   g. Personnel from the Portsmouth Local Air Agency 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.

   h. 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 Portsmouth

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Local Air Agency 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 Portsmouth Local Air Agency.

F. Miscellaneous Requirements

1. Construction of the air contaminant sources covered by this permit may not begin until the final, effective National Pollutant Discharge Elimination System (NPDES) permit is issued for this facility. This facility has applied for a NPDES permit which is identified as Ohio NPDES Permit No.: 0IN00259*AD/Federal Application No.: OH0135305.

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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 operation(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(C)	See section A.2.a below.
OAC rule 3745-17-07(B)	See section A.2.c below.
OAC rule 3745-17-08(B)	See section A.2.d below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable control equipment) as proposed by the permittee for the purpose of avoiding best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

i. To treat the paved roadways and parking areas with sweeping and/or watering at sufficient treatment frequencies to ensure controlled potential particulate emissions are less than 10.0 tons per year.

2.b 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.c 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.d 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).

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2.e For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

B. Operational Restrictions

None

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.

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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.

E. Testing Requirements

None

F. Miscellaneous Requirements

None

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

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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) - Denatured Ethanol Loading Rack to truck and rail controlled with Regenerative Thermal Oxidizers

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Allowable emissions from the regenerative thermal oxidizers (RTO) stack (for emissions units specified in section A.2.a below) shall not exceed the following: 8.6 lbs/hr of nitrogen oxides (NOx); 15 lbs/hr of carbon monoxide (CO); 26.9 lbs/hr of volatile organic compounds (VOC); 15 lbs/hr and 65.7 tons/yr of sulfur dioxide (SO2); and 6.8 lbs/hr and 29.78 tons/yr of particulate emissions (PE). The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C), OAC rule 3745-21-07(E) and OAC rule 3745-21-08(B). Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average. See sections A.2.a and A.2.b below.
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Allowable emissions from the RTO stack (for emissions units specified in section A.2.a below) shall not exceed the following: 37.8 tons NOx per rolling, 12-month period; 65.7 tons CO per rolling, 12-month period; and 82.97 tons VOC per rolling, 12-month period. See section B.1 below.
OAC rule 3745-21-07(E)	See sections A.2.c through A.2.f below.

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-07(A)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.g below.
OAC rule 3745-114-01	See sections C.3, C.4 and C.5 below.

2. Additional Terms and Conditions

2.a The following emissions units are vented to two RTO with one common stack: P005 (mash and yeast operations), P006 (fermentation), P007 (distillation process), P008, (DDGS dryer #1), P009 (DDGS dryer #2) P906 (DDGS handling and cooling) and J001 (denatured ethanol loading to truck and rail).

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

i. a RTO for VOC and CO control. The RTOs shall meet a minimum control efficiency of 90% for CO emissions and 98% for VOC emissions.

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

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

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

2.g The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply

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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.h The permittee shall include the appropriate process equipment and regulated components from this emissions unit in a site fugitive Leak Detection and Repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (includes 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).

2.i For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

1. The annual denatured ethanol throughput rate for this emissions unit and J002 (denatured ethanol loading rack to barge) shall not exceed a combined total of 123,900,000 gallons, based upon a rolling, 12-month summation of the loadout rates.

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

Month	Maximum Allowable Cumulative Ethanol Loadout (gallons)
1	24,780,000
1-2	49,560,000
1-3	74,340,000
1-4	99,120,000
1-5	123,900,000
1-6	123,900,000
1-7	123,900,000
1-8	123,900,000
1-9	123,900,000

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1-10	123,900,000
1-11	123,900,000
1-12	123,900,000

After the first 12 calendar months of operation, compliance with the annual truck, rail and barge ethanol throughput rate limitation shall be based upon the rolling, 12-month summation of the truck ethanol throughput rate and upon the rolling, 12-month summation of the rail ethanol throughput rate and upon the rolling, 12-month summation of the barge ethanol throughput rate.

2. All emissions units vented to the RTO (see section A.2.a above) shall be shutdown when the RTO is not in operation.

3. Until compliance testing has been conducted, as required in this permit, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time when the emissions unit is in operation, shall be maintained at the average temperature recommended by the manufacturer of the oxidizers, with any modifications deemed necessary by the permittee. Following compliance testing, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emission test that demonstrated the emissions unit to be in compliance.

C. Monitoring and/or Recordkeeping Requirements

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

   a. the denatured ethanol loadout rate to this emission unit, in gallons;

   b. the denatured ethanol loadout rate to this emission unit and J002 combined, in gallons;

   c. the permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx, and VOC emissions; and

   d. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of:

      i. the denatured ethanol loadout rate to this emissions unit, in gallons; and

      ii. the denatured ethanol loadout rate to this emissions unit and J002, combined, in gallons;

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During the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative denatured ethanol loading rate for each calendar month.

2. The permittee shall install, operate, and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizers when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and calculate the average combustion temperature within the thermal oxidizers, each of the eight, 3-hour blocks of time during each day of operation, and shall record and maintain the following information each day:

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

   b. a log or record of the operating time for the capture (collection) system, thermal oxidizers, monitoring equipment, and the associated emissions unit.

   These records shall be maintained at the facility for a period of three years.

3. The permit to install for this emissions unit [J001] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: acetaldehyde
   TLV (ug/m3): 33,195 (Converted from the STEL)
   Maximum Hourly Emission Rate (lbs/hr): 0.94 (RTO stack)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7.64
   MAGLC (ug/m3): 790

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Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.38 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3.09
MAGLC (ug/m3): 4,190

Pollutant: ethanol
TLV (ug/m3): 1,884,253
Maximum Hourly Emission Rate (lbs/hr): 5.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 40.42
MAGLC (ug/m3): 44,863

Pollutant: acetic acid
TLV (ug/m3): 24,540
Maximum Hourly Emission Rate (lbs/hr): 2.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 16.10
MAGLC (ug/m3): 584.28

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.56 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.46
MAGLC (ug/m3): 42,156

Pollutant: methanol
TLV (ug/m3): 262,086
Maximum Hourly Emission Rate (lbs/hr): 0.36 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.88
MAGLC (ug/m3): 6,240.14

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 1.1 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 8.91
MAGLC (ug/m3): 42,934

4. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

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.).

5. 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 toxic air 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) meet(s) the definition of a "modification" under other provisions of the rule, 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 the 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 exceedances of the following:

   a. the rolling, 12-month denatured ethanol throughput rate limitations for this emissions unit; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative ethanol throughput rates for this emissions unit; and

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b. the rolling, 12-month denatured ethanol throughput rate limitations for this emissions unit and J002, combined; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative ethanol throughput rates for this emissions unit and J002, combined; and

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

2. The permittee shall submit annual reports that specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

3. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within each RTO does not comply with the temperature limitation specified above. These deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

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:

Allowable emissions from the RTO (for emissions units specified in section A.2.a) shall not exceed the following:

15 lbs/hr and 65.7 tons/yr of SO2; and
6.8 lbs/hr and 29.78 tons/yr of PE.

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton.

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b. Emission Limitations:

Allowable emissions from the RTO stack (for emissions units specified in section A.2.a) shall not exceed the following:

8.6 lbs/hr of NOx;
15 lbs/hr of CO;
26.9 lbs/hr of VOC;
37.8 tons of NOx per rolling, 12-month period;
65.7 tons of CO per rolling, 12-month period; and
82.97 tons of VOC per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the actual hours of operation per month and dividing by 2000 lbs/ton, to arrive at the tons per month emissions. The monthly emissions shall be added to the previous 11 months emissions to determine the rolling, 12-month total emissions.

c. Emission Limitation:

Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

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

2. 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, SO2 and PE mass emission limitations from the RTO controlling this emissions unit. Emission testing shall also be conducted to demonstrate

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compliance with the control efficiency limitations for CO and VOC from the RTO controlling this emissions unit.

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

Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;
Method 5 from 40 CFR Part 60, Appendix A for PE, total filterable particulate;
Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles;
Method 7e from 40 CFR Part 60, Appendix A for NOx;
Method 6c from 40 CFR Part 60, Appendix A for SO2;
Method 10 from 40 CFR Part 60, Appendix A for CO; and
Method 18, 25 or 25A from 40 CFR Part 60, Appendix A for VOC (following guidance provided in the Midwest Scaling Protocol). 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.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency (LAA).

d. The testing shall be conducted while the emissions unit and all emissions units vented to the RTO are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth LAA. The test shall be conducted at the inlet as well as the outlet of the control device for purposes of determining the efficiency of the control device.

e. During emission testing, the permittee shall also record the average combustion temperature within the RTO, in degrees Fahrenheit.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth LAA. 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 Portsmouth LAA refusal to accept the results of the emission test(s).

g. Personnel from the Portsmouth LAA 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.

h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth LAA 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 Portsmouth LAA.

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 - (J002) - Denatured Ethanol Loading Rack to Barge controlled by a Flare

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Volatile organic compound (VOC) emissions from the flare shall not exceed 1.09 tons per rolling, 12-month period. Nitrogen oxides (NOx) emissions from the flare shall not exceed 0.36 ton per rolling, 12-month period. Carbon monoxide (CO) emissions from the flare shall not exceed 1.76 tons per rolling, 12-month period. See sections A.2.a, A.2.c through A.2.f and B.1 below.
ORC 3704.03(T)(4)	See section A.2.b below.
OAC rule 3745-21-08(B)	See section A.2.g below.
OAC rule 3745-114-01	See sections C.3, C.4 and C.5 below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source 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. In addition, the hours of operation of the flare have been limited to 1500 hours per year as a voluntary restriction as proposed by the permittee. These restrictions allow the permittee to avoid best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

2.b The best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) and SO2 emissions from this air contaminant source since the uncontrolled potential to emit for PE and SO2 is less than ten tons per year.

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

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

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

2.g The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the emissions limitations established pursuant to OAC rule 3745-21-08(B).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and U.S. EPA approves the revision to OAC rule 3745-21-08, the requirements to satisfy "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

B. Operational Restrictions

1. The annual denatured ethanol throughput rate for this emissions unit and J001 (denatured ethanol loading rack to truck and rail) shall not exceed a combined total of 123,900,000 gallons, based upon a rolling, 12-month summation of the loadout rates.

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

Month	Maximum Allowable Cumulative Ethanol Loadout (gallons)
1	24,780,000
1-2	49,560,000
1-3	74,340,000
1-4	99,120,000
1-5	123,900,000
1-6	123,900,000
1-7	123,900,000

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1-8	123,900,000
1-9	123,900,000
1-10	123,900,000
1-11	123,900,000
1-12	123,900,000

After the first 12 calendar months of operation, compliance with the annual truck, rail and barge ethanol throughput rate limitation shall be based upon the rolling, 12-month summation of the truck ethanol throughput rate and upon the rolling, 12-month summation of the rail ethanol throughput rate and upon the rolling, 12-month summation of the barge ethanol throughput rate.

2. The annual operating hours for this emissions unit shall not exceed 1,500 hrs, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the operating hour levels specified in the following table:

Month	Maximum Allowable Cumulative Operating Hours
1	300
1-2	600
1-3	900
1-4	1200
1-5	1500
1-6	1500
1-7	1500
1-8	1500
1-9	1500
1-10	1500
1-11	1500
1-12	1500

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

3. 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 rule 3745-21-10 of the Administrative Code, shall be 300 Btu/scf or greater;

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

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

C. Monitoring and/or Recordkeeping Requirements

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

   a. the denatured ethanol loadout rate to this emissions unit, in gallons;

   b. the denatured ethanol loadout rate to this emissions unit and J001 combined, in gallons;

   c. the operating hours of the flare;

   d. the rolling, 12-month summation of CO, NOx, and VOC emissions, in tons; and

   e. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of:

      i. the denatured ethanol loadout rate to this emissions unit, in gallons;

      ii. the denatured ethanol loadout rate to this emissions units and J001 combined, in gallons; and

      iii. the operating hours of the flare.

   During the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative denatured ethanol loading rate for each calendar month.

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

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recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

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

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

c. the permittee shall maintain records of the following:

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

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

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

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

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

3. The permit to install for this emissions unit [J002] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ethanol
TLV (ug/m3): 1,884,253
Maximum Hourly Emission Rate (lbs/hr): 1.91
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 70.22
MAGLC (ug/m3): 44,863

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4. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

   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.).

5. 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 toxic air 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) meet(s) the definition of a "modification" under other provisions of the rule, 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 the 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 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 that identify all exceedances of any of the following requirements for the flare:

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

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

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

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

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

3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:

   a. the rolling, 12-month ethanol throughput rate limitations to this emissions unit and J001, combined; and for the first 12 calendar months of operation, all exceedances of the allowable cumulative ethanol throughput rates to this emissions unit and J001, combined;

   b. the rolling, 12-month operating hours limitation; and for the first 12 calendar months of operation, all exceedances of the allowable cumulative operating hours of the flare; and

   c. the rolling, 12-month summation of NO_X, CO, and VOC emissions.

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

4. The permittee shall submit annual reports which specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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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:

   a. Emission Limitation:

      VOC emissions from the flare shall not exceed 1.09 tons per rolling, 12-month period.

      Applicable Compliance Method:

      Compliance shall be based upon the record keeping requirements in section C.1 above and shall be calculated using the loading loss (LL) calculations from AP-42 section 5.2. The vapor headspace of the barge is assumed to be saturated with ethanol vapors during loading. Compliance has been demonstrated using inputs representing Potential To Emit (PTE) conditions as follows:

      LL (lb VOC/1000 gallons) = [12.46 * (SPM / T)]

      where:

      S= saturation factor (0.6 for submerged load w/o vapor balance);
      P= true vapor pressure of liquid loaded (0.8301 for denatured ethanol);
      M= molecular weight of vapors (49.4 for denatured ethanol); and
      T= temperature of bulk liquid (517.45 R).

      Using the values in the above equations, the VOC factors were used to calculate emissions as follows:

      LL= 0.59 lb VOC/1000 gallons

      Capture efficiency = 99%
      Control efficiency of flare = 98%

      Compliance with the rolling, 12-month allowable emission rate for VOC shall be determined as follows:

      LL = [{(0.59 * 0.99 * (1 - 0.98)) + (0.59 * (1 - 0.99))} / 1000 gal] * 123,900,000 gal per rolling, 12-month period / 2,000 lbs/ton = 1.09 tons per rolling, 12-month period

      Also included are emissions associated with the pilot burner which are calculated by multiplying the AP-42 emission factor of 0.0055 lb/mmBtu from table 1.4-1 by the heat capacity of the pilot of 0.1 mmBtu/hr and the appropriate conversion factors (ton/2000 lbs and 8760 hrs/yr).

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No testing for this emissions limitation is specifically required by this permit but, if required by Ohio EPA, may be requested pursuant to OAC rule 3745-15-04(A).

b. Emission Limitation:

CO emissions from the flare shall not exceed 1.76 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section C.1 above and shall be calculated using AP-42 Tables 1.4-1 (July 1998) for the pilot flame and 13.5-1 (January 1995) for the flare and inputs representing the Potential To Emit (PTE), as follows:

Emissions = Flare Emissions + Pilot Light Emissions

Flare Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)
Flare Emissions = (6.2 mmBtu/hr) * (0.37 lb/mmBtu) * (1500 hrs/yr) / (2000 lbs/ton)
Flare Emissions = 1.72 tons per rolling, 12-month period

Pilot Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)
Pilot Emissions = (0.1 mmBtu/hr) * (0.084 lb/mmBtu) * (8760 hrs/yr) / (2000 lbs/ton)
Pilot Emissions = 0.04 tons per rolling, 12-month period

Emissions = 1.72 + 0.04 = 1.76 tons per rolling, 12-month period

c. Emission Limitation:

NO_X emissions from the flare shall not exceed 0.36 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section C.1 above and shall be calculated using AP-42 Tables 1.4-1 (July 1998) for the pilot flame and 13.5-1 (January 1995) for the flare and inputs representing the Potential To Emit (PTE), as follows:

Emissions = Flare Emissions + Pilot Light Emissions

Flare Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)
Flare Emissions = (6.2 mmBtu/hr) * (0.068 lb/mmBtu) * (1500 hrs/yr) / (2000 lbs/ton)
Flare Emissions = 0.32 ton per rolling, 12-month period

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Pilot Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)
Pilot Emissions = (0.1 mmBtu/hr) * (0.1 lb/mmBtu) * (8760 hrs/yr) / (2000 lbs/ton)
Pilot Emissions = 0.04 ton per rolling, 12-month period

Emissions = 0.32 + 0.04 = 0.36 ton per rolling, 12-month period

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 operation(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 Hammermill No. 1 controlled with a baghouse

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the voluntary emission limitation established pursuant to section A.2.a.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a baghouse, whenever this air contaminant source is in operation, with an outlet PE concentration of 0.005 gr/dscf of exhaust gases, as a voluntary restriction as proposed by the permittee. This restriction allows the permittee to avoid best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

2.b For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

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

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 serving this emissions unit. The date and time of the visible emissions check and the presence or

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absence of any visible emissions shall be noted in an operations log. If visible 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal 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 serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Portsmouth Local Air Agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

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

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b. Emission Limitation:

PE concentration of 0.005 gr/dscf of exhaust gases**.**

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing specified in section E.2.

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

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the outlet concentration of 0.005 gr/dscf.

c. The following test method shall be employed to demonstrate compliance with the voluntary emission limitation: for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from the Portsmouth Local Air Agency 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.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency within 30 days following completion of the test(s). The

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permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency.

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 operation(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) - Grain Hammermill No. 2 controlled with a baghouse

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the voluntary emission limitation established pursuant to section A.2.a.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a baghouse, whenever this air contaminant source is in operation, with an outlet PE concentration of 0.005 gr/dscf of exhaust gases, as a voluntary restriction as proposed by the permittee. This restriction allows the permittee to avoid best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

2.b For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

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

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 serving this emissions unit. The date and time of the visible emissions check and the presence or

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absence of any visible emissions shall be noted in an operations log. If visible 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal 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 serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Portsmouth Local Air Agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

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

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b. Emission Limitation:

PE concentration of 0.005 gr/dscf of exhaust gases**.**

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing specified in section E.2.

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

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the outlet concentration of 0.005 gr/dscf.

c. The following test method shall be employed to demonstrate compliance with the voluntary emission limitation: for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from the Portsmouth Local Air Agency 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.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency within 30 days following completion of the test(s). The

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permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency.

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 operation(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) - Grain Hammermill No. 3 controlled with a baghouse

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the voluntary emission limitation established pursuant to section A.2.a.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a baghouse, whenever this air contaminant source is in operation, with an outlet PE concentration of 0.005 gr/dscf of exhaust gases, as a voluntary restriction as proposed by the permittee. This restriction allows the permittee to avoid best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

2.b For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

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

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 serving this emissions unit. The date and time of the visible emissions check and the presence or

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absence of any visible emissions shall be noted in an operations log. If visible 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal 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 serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Portsmouth Local Air Agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

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

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b. Emission Limitation:
PE concentration of 0.005 gr/dscf of exhaust gases**.**

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing specified in section E.2.

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

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the outlet concentration of 0.005 gr/dscf.

c. The following test method shall be employed to demonstrate compliance with the voluntary emission limitation: for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from the Portsmouth Local Air Agency 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.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency within 30 days following completion of the test(s). The

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permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency.

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 operation(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) - Grain Hammermill No. 4 controlled with a baghouse

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the voluntary emission limitation established pursuant to section A.2.a.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a baghouse, whenever this air contaminant source is in operation, with an outlet PE concentration of 0.005 gr/dscf of exhaust gases, as a voluntary restriction as proposed by the permittee. This restriction allows the permittee to avoid best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

2.b For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

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

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 serving this emissions unit. The date and time of the visible emissions check and the presence or

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absence of any visible emissions shall be noted in an operations log. If visible 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal 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 serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Portsmouth Local Air Agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

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

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b. Emission Limitation:
PE concentration of 0.005 gr/dscf of exhaust gases**.**

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing specified in section E.2.

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

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the outlet concentration of 0.005 gr/dscf.

c. The following test method shall be employed to demonstrate compliance with the voluntary emission limitation: for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from the Portsmouth Local Air Agency 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.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency within 30 days following completion of the test(s). The

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permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency.

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 operation(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) - Mash and Yeast operations (mash water tank, mingler, slurry tank and cooker) controlled with Regenerative Thermal Oxidizers

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Allowable emissions from the regenerative thermal oxidizers (RTO) stack (for emissions units specified in section A.2.a below) shall not exceed the following: 8.6 lbs/hr of nitrogen oxides (NOx); 15 lbs/hr of carbon monoxide (CO); 26.9 lbs/hr of volatile organic compounds (VOC); 15 lbs/hr and 65.7 tons/yr of sulfur dioxide (SO2); and 6.8 lbs/hr and 29.78 tons/yr of particulate emissions (PE). The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C), OAC rule 3745-21-08(B), 40 CFR Part 60, Subpart VV and OAC rule 3745-21-09(DD). Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average. See sections A.2.a and A.2.b below.
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Allowable emissions from the RTO stack (for emissions units specified in section A.2.a below) shall not exceed the following: 37.8 tons NOx per rolling, 12-month period; 65.7 tons CO per rolling, 12-month period; and 82.97 tons VOC per rolling, 12-month period.
OAC rule 3745-17-07(A)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-11(B)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.c below.
OAC rule 3745-114-01	See sections C.3, C.4 and C.5 below.
OAC rule 3745-21-09(DD)	See the requirements for emissions unit P801. See section A.2.d below.
40 CFR Part 60, Subpart VV	See the requirements for emissions unit P801. See section A.2.d below.

2. Additional Terms and Conditions

2.a The following emissions units are vented to two RTO with one common stack: P005 (mash and yeast operations), P006 (fermentation), P007 (distillation process), P008 (DDGS dryer #1), P009 (DDGS dryer #2), P906 (DDGS handling and cooling) and J001 (denatured ethanol loading to truck and rail).

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

i. RTO for VOC and CO control. The RTO shall meet a minimum control efficiency of 90% for CO emissions and 98% for VOC emissions.

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.

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2.d The permittee shall include the appropriate process equipment and regulated components from this emissions unit in a site fugitive Leak Detection and Repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (includes 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).

2.e For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

1. All emissions units vented to the RTO (see section A.2.a above) shall be shutdown when the RTO is not in operation.

2. Until compliance testing has been conducted, as required in this permit, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time when the emissions unit is in operation, shall be maintained at the average temperature recommended by the manufacturer of the oxidizers, with any modifications deemed necessary by the permittee. Following compliance testing, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emission test that demonstrated the emissions unit to be in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall install, operate, and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizers when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and calculate the average combustion temperature within the thermal oxidizers, each of the eight, 3-hour blocks of time during each day of operation, and shall record and maintain the following information each day:

   a. all 3-hour blocks of time, when the emissions unit was in operation, during which the average combustion temperature within the thermal oxidizers was more than 50

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degrees Fahrenheit below the average temperature maintained during the most recent emissions test that demonstrated the emissions unit to be in compliance; and

b. a log or record of the operating time for the capture (collection) system, thermal oxidizers, monitoring equipment, and the associated emissions unit.

These records shall be maintained at the facility for a period of three years.

2. The permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx, and VOC emissions.

3. The permit to install for this emissions unit [P005] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the “worst case” pollutant(s):

Pollutant: acetaldehyde
TLV (ug/m3): 33,195 (Converted from the STEL)
Maximum Hourly Emission Rate (lbs/hr): 0.94 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7.64
MAGLC (ug/m3): 790

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.38 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3.09
MAGLC (ug/m3): 4,190

Pollutant: ethanol
TLV (ug/m3): 1,884,253
Maximum Hourly Emission Rate (lbs/hr): 5.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 40.42
MAGLC (ug/m3): 44,863

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Pollutant: acetic acid
TLV (ug/m3): 24,540
Maximum Hourly Emission Rate (lbs/hr): 2.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 16.10
MAGLC (ug/m3): 584.28

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.56 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.46
MAGLC (ug/m3): 42,156

Pollutant: methanol
TLV (ug/m3): 262,086
Maximum Hourly Emission Rate (lbs/hr): 0.36 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.88
MAGLC (ug/m3): 6,240.14

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 1.1 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 8.91
MAGLC (ug/m3): 42,934

4. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

   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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5. 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 toxic air 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) meet(s) the definition of a “modification” under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the RTO does not comply with the temperature limitation specified above. These deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

2. The permittee shall submit annual reports that specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

      Allowable emissions from the RTO (for emissions units specified in section A.2.a) shall not exceed the following:

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15 lbs/hr and 65.7 tons/yr of SO2; and
6.8 lbs/hr and 29.78 tons/yr of PE.

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton.

b. Emission Limitations:

Allowable emissions from the RTO stack (for emissions units specified in section A.2.a) shall not exceed the following:

8.6 lbs/hr of NOx;
15 lbs/hr of CO;
26.9 lbs/hr of VOC;

37.8 tons of NOx per rolling, 12-month period;
65.7 tons of CO per rolling, 12-month period; and
82.97 tons of VOC per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the actual hours of operation per month and dividing by 2000 lbs/ton, to arrive at the tons per month emissions. The monthly emissions shall be added to the previous 11 months emissions to determine the rolling, 12-month total emissions.

c. Emission Limitation:

Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average.

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Applicable Compliance Method:

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

2. 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, SO2 and PE mass emission limitations from the RTO controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitations for CO and VOC from the RTO controlling this emissions unit.

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

      Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;
      Method 5 from 40 CFR Part 60, Appendix A for PE, total filterable particulate;
      Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles;
      Method 7e from 40 CFR Part 60, Appendix A for NOx;
      Method 6c from 40 CFR Part 60, Appendix A for SO2;
      Method 10 from 40 CFR Part 60, Appendix A for CO; and
      Method 18, 25 or 25A from 40 CFR Part 60, Appendix A for VOC (following guidance provided in the Midwest Scaling Protocol). 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.

      Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency (LAA).

   d. The testing shall be conducted while the emissions unit and all emissions units vented to the RTO are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth LAA. The test shall be conducted at the inlet as well as the outlet of the control device for purposes of determining the efficiency of the control device.

e. During emission testing, the permittee shall also record the average combustion temperature within the RTO, in degrees Fahrenheit.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth LAA. 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 Portsmouth LAA refusal to accept the results of the emission test(s).

g. Personnel from the Portsmouth LAA 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.

h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth LAA 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 Portsmouth LAA.

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) - Fermentation and Beer Well (liquification tanks, and fermentation tanks) controlled with a Wet Scrubber and Regenerative Thermal Oxidizers

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Allowable emissions from the regenerative thermal oxidizers (RTO) stack (for emissions units specified in section A.2.a below) shall not exceed the following: 8.6 lbs/hr of nitrogen oxides (NOx); 15 lbs/hr of carbon monoxide (CO); 26.9 lbs/hr of volatile organic compounds (VOC); 15 lbs/hr and 65.7 tons/yr of sulfur dioxide (SO2); and 6.8 lbs/hr and 29.78 tons/yr of particulate emissions (PE). The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C), OAC rule 3745-21-08(B), 40 CFR Part 60, Subpart VV and OAC rule 3745-21-09(DD). Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average. See sections A.2.a and A.2.b below.
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Allowable emissions from the RTO stack (for emissions units specified in section A.2.a below) shall not exceed the following: 37.8 tons NOx per rolling, 12-month period; 65.7 tons CO per rolling, 12-month period; and 82.97 tons VOC per rolling, 12-month period.
OAC rule 3745-17-07(A)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.c below.
OAC rule 3745-114-01	See sections C.4, C.5 and C.6 below.
OAC rule 3745-21-09(DD)	See the requirements for emissions unit P801. See section A.2.d below.
40 CFR Part 60, Subpart VV	See the requirements for emissions unit P801. See section A.2.d below.

2. Additional Terms and Conditions

2.a The following emissions units are vented to two RTO with one common stack: P005 (mash and yeast operations), P006 (fermentation), P007 (distillation process), P008 (DDGS dryer #1), P009 (DDGS dryer #2), P906 (DDGS handling and cooling) and J001 (denatured ethanol loading to truck and rail).

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

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

ii. RTO following the wet scrubber for VOC and CO control. The RTO shall meet a minimum control efficiency of 90% for CO emissions and 98% for VOC emissions.

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

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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 The permittee shall include the appropriate process equipment and regulated components from this emissions unit in a site fugitive Leak Detection and Repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (includes 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).

2.e For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

1. This emissions unit shall be shutdown when the wet scrubber is not in operation.

2. All emissions units vented to the RTO (see section A.2.a above) shall be shutdown when the RTO is not in operation.

3. The following parameters on the scrubber controlling this emissions unit shall be continuously maintained at all times while the emissions unit is in operation:

   a. the pressure drop across the scrubber, in inches of water, shall be maintained at or above a value to be determined by design information and/or manufacturer's data; and

   b. the scrubber water flow rate in gallons per minute, shall be continuously maintained at or above a value to be determined by design information and/or manufacturer's data.

4. Until compliance testing has been conducted, as required in this permit, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time when the emissions unit is in operation, shall be maintained at the average temperature recommended by the manufacturer of the oxidizers, with any modifications deemed necessary by the permittee. Following compliance testing, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emission test that demonstrated the emissions unit to be in compliance.

C. Monitoring and/or Recordkeeping Requirements

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1. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall collect and record the following information each day:

   a. the pressure drop across the scrubber, in inches of water, on a once per shift basis; and

   b. the scrubber water flow rate, in gallons per minute, on a once per shift basis.

2. The permittee shall install, operate, and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizers when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and calculate the average combustion temperature within the thermal oxidizers, each of the eight, 3-hour blocks of time during each day of operation, and shall record and maintain the following information each day:

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

   b. a log or record of the operating time for the capture (collection) system, thermal oxidizers, monitoring equipment, and the associated emissions unit.

   These records shall be maintained at the facility for a period of three years.

3. The permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx and VOC emissions.

4. The permit to install for this emissions unit [P006] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling

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was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetaldehyde
TLV (ug/m3): 33,195 (Converted from the STEL)
Maximum Hourly Emission Rate (lbs/hr): 0.94 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7.64
MAGLC (ug/m3): 790

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.38 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3.09
MAGLC (ug/m3): 4,190

Pollutant: ethanol
TLV (ug/m3): 1,884,253
Maximum Hourly Emission Rate (lbs/hr): 5.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 40.42
MAGLC (ug/m3): 44,863

Pollutant: acetic acid
TLV (ug/m3): 24,540
Maximum Hourly Emission Rate (lbs/hr): 2.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 16.10
MAGLC (ug/m3): 584.28

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.56 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.46
MAGLC (ug/m3): 42,156

Pollutant: methanol
TLV (ug/m3): 262,086
Maximum Hourly Emission Rate (lbs/hr): 0.36 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.88
MAGLC (ug/m3): 6,240.14

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Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 1.1 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 8.91
MAGLC (ug/m3): 42,934

5. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

   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.).

6. 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 toxic air 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) meet(s) the definition of a "modification" under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

   a. the static pressure drop across the scrubber; and

   b. the scrubber water flow rate.

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

2. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the RTO does not comply with the temperature limitation specified above. These 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 that specify the total CO, NOx and VOC emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

      Allowable emissions from the RTO (for emissions units specified in section A.2.a) shall not exceed the following:

      15 lbs/hr and 65.7 tons/yr of SO2; and
      6.8 lbs/hr and 29.78 tons/yr of PE.

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Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton.

b. Emission Limitations:

Allowable emissions from the RTO stack (for emissions units specified in section A.2.a) shall not exceed the following:

8.6 lbs/hr of NOx;
15 lbs/hr of CO;
26.9 lbs/hr of VOC;

37.8 tons of NOx per rolling, 12-month period;
65.7 tons of CO per rolling, 12-month period; and
82.97 tons of VOC per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the actual hours of operation per month and dividing by 2000 lbs/ton, to arrive at the tons per month emissions. The monthly emissions shall be added to the previous 11 months emissions to determine the rolling, 12-month total emissions.

c. Emission Limitation:

Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

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

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2. 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, SO2 and PE mass emission limitations from the RTO controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitations for CO and VOC from the RTO controlling this emissions unit.

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

      Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;
      Method 5 from 40 CFR Part 60, Appendix A for PE, total filterable particulate;
      Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles;
      Method 7e from 40 CFR Part 60, Appendix A for NOx;
      Method 6c from 40 CFR Part 60, Appendix A for SO2;
      Method 10 from 40 CFR Part 60, Appendix A for CO; and
      Method 18, 25 or 25A from 40 CFR Part 60, Appendix A for VOC (following guidance provided in the Midwest Scaling Protocol). 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.

      Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency (LAA).

   d. The testing shall be conducted while the emissions unit and all emissions units vented to the RTO are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth LAA. The test shall be conducted at the inlet as well as the outlet of the control device for purposes of determining the efficiency of the control device.

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

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

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

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iii. the average combustion temperature within the RTO, in degrees Fahrenheit.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth LAA. 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 Portsmouth LAA refusal to accept the results of the emission test(s).

g. Personnel from the Portsmouth LAA 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.

h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth LAA 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 Portsmouth LAA.

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 operation(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) - Distillation Process (distillation columns, stillage, condensation equipment, sieves and dehydration equipment) controlled with Regenerative Thermal Oxidizers

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Allowable emissions from the regenerative thermal oxidizers (RTO) stack (for emissions units specified in section A.2.a below) shall not exceed the following: 8.6 lbs/hr of nitrogen oxides (NOx); 15 lbs/hr of carbon monoxide (CO); 26.9 lbs/hr of volatile organic compounds (VOC); 15 lbs/hr and 65.7 tons/yr of sulfur dioxide (SO2); and 6.8 lbs/hr and 29.78 tons/yr of particulate emissions (PE). The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C), OAC rule 3745-21-08(B), 40 CFR Part 60, Subpart VV and OAC rule 3745-21-09(DD). Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average. See sections A.2.a and A.2.b below.
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Allowable emissions from the RTO stack (for emissions units specified in section A.2.a below) shall not exceed the following: 37.8 tons NOx per rolling, 12-month period; 65.7 tons CO per rolling, 12-month period; and 82.97 tons VOC per rolling, 12-month period.
OAC rule 3745-17-07(A)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-11(B)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.c below.
OAC rule 3745-114-01	See sections C.3, C.4 and C.5 below.
OAC rule 3745-21-09(DD)	See the requirements for emissions unit P801. See section A.2.d below.
40 CFR Part 60, Subpart VV	See the requirements for emissions unit P801. See section A.2.d below.

2. Additional Terms and Conditions

2.a The following emissions units are vented to two RTO with one common stack: P005 (mash and yeast operations), P006 (fermentation), P007 (distillation process), P008 (DDGS dryer #1), P009 (DDGS dryer #2), P906 (DDGS handling and cooling) and J001 (denatured ethanol loading to truck and rail).

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

i. RTO for VOC and CO control. The RTO shall meet a minimum control efficiency of 90% for CO emissions and 98% for VOC emissions.

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.

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2.d The permittee shall include the appropriate process equipment and regulated components from this emissions unit in a site fugitive Leak Detection and Repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (includes 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).

2.e For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

1. All emissions units vented to the RTO (see section A.2.a above) shall be shutdown when the RTO is not in operation.

2. Until compliance testing has been conducted, as required in this permit, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time when the emissions unit is in operation, shall be maintained at the average temperature recommended by the manufacturer of the oxidizers, with any modifications deemed necessary by the permittee. Following compliance testing, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emission test that demonstrated the emissions unit to be in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall install, operate, and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizers when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and calculate the average combustion temperature within the thermal oxidizers, each of the eight, 3-hour blocks of time during each day of operation, and shall record and maintain the following information each day:

   a. all 3-hour blocks of time, when the emissions unit was in operation, during which the average combustion temperature within the thermal oxidizers was more than 50

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degrees Fahrenheit below the average temperature maintained during the most recent emissions test that demonstrated the emissions unit to be in compliance; and

b. a log or record of the operating time for the capture (collection) system, thermal oxidizers, monitoring equipment, and the associated emissions unit.

These records shall be maintained at the facility for a period of three years.

2. The permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx, and VOC emissions.

3. The permit to install for this emissions unit [P007] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the “worst case” pollutant(s):

Pollutant: acetaldehyde
TLV (ug/m3): 33,195 (Converted from the STEL)
Maximum Hourly Emission Rate (lbs/hr): 0.94 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7.64
MAGLC (ug/m3): 790

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.38 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3.09
MAGLC (ug/m3): 4,190

Pollutant: ethanol
TLV (ug/m3): 1,884,253
Maximum Hourly Emission Rate (lbs/hr): 5.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 40.42
MAGLC (ug/m3): 44,863

Pollutant: acetic acid
TLV (ug/m3): 24,540
Maximum Hourly Emission Rate (lbs/hr): 2.0 (RTO stack)

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 16.10
MAGLC (ug/m3): 584.28

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.56 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.46
MAGLC (ug/m3): 42,156

Pollutant: methanol
TLV (ug/m3): 262,086
Maximum Hourly Emission Rate (lbs/hr): 0.36 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.88
MAGLC (ug/m3): 6,240.14

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 1.1 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 8.91
MAGLC (ug/m3): 42,934

4. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists’ (ACGIH’s) handbook entitled “TLVs and BEIs” (“Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices”);

   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.).

5. 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

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rule 3745-31-01 solely due to the emissions of any type of toxic air 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) meet(s) the definition of a "modification" under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

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

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the RTO does not comply with the temperature limitation specified above. These deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

2. The permittee shall submit annual reports that specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

Allowable emissions from the RTO (for emissions units specified in section A.2.a) shall not exceed the following:

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15 lbs/hr and 65.7 tons/yr of SO2; and
6.8 lbs/hr and 29.78 tons/yr of PE.

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton.

b. Emission Limitations:

Allowable emissions from the RTO stack (for emissions units specified in section A.2.a) shall not exceed the following:

8.6 lbs/hr of NOx;
15 lbs/hr of CO;
26.9 lbs/hr of VOC;

37.8 tons of NOx per rolling, 12-month period;
65.7 tons of CO per rolling, 12-month period; and
82.97 tons of VOC per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the actual hours of operation per month and dividing by 2000 lbs/ton, to arrive at the tons per month emissions. The monthly emissions shall be added to the previous 11 months emissions to determine the rolling, 12-month total emissions.

c. Emission Limitation:

Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average.

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Applicable Compliance Method:

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

2. 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, SO2 and PE mass emission limitations from the RTO controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitations for CO and VOC from the RTO controlling this emissions unit.

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

      Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;
      Method 5 from 40 CFR Part 60, Appendix A for PE, total filterable particulate;
      Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles;
      Method 7e from 40 CFR Part 60, Appendix A for NOx;
      Method 6c from 40 CFR Part 60, Appendix A for SO2;
      Method 10 from 40 CFR Part 60, Appendix A for CO; and
      Method 18, 25 or 25A from 40 CFR Part 60, Appendix A for VOC (following guidance provided in the Midwest Scaling Protocol). 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.

      Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency (LAA).

   d. The testing shall be conducted while the emissions unit and all emissions units vented to the RTO are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth LAA. The test shall be conducted at the inlet as well as the outlet of the control device for purposes of determining the efficiency of the control device.

e. During emission testing, the permittee shall also record the average combustion temperature within the RTO, in degrees Fahrenheit.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth LAA. 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 Portsmouth LAA refusal to accept the results of the emission test(s).

g. Personnel from the Portsmouth LAA 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.

h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth LAA 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 Portsmouth LAA.

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 operation(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) - 90 mmBtu/hr DDGS Dryer No. 1 controlled with Regenerative Thermal Oxidizers

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Allowable emissions from the regenerative thermal oxidizers (RTO) stack (for emissions units specified in section A.2.a below) shall not exceed the following: 8.6 lbs/hr of nitrogen oxides (NOx); 15 lbs/hr of carbon monoxide (CO); 26.9 lbs/hr of volatile organic compounds (VOC); 15 lbs/hr and 65.7 tons/yr of sulfur dioxide (SO2); and 6.8 lbs/hr and 29.78 tons/yr of particulate emissions (PE). The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and OAC rule 3745-21-08(B). Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average. See sections A.2.a and A.2.b below.
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Allowable emissions from the RTO stack (for emissions units specified in section A.2.a below) shall not exceed the following: 37.8 tons NOx per rolling, 12-month period; 65.7 tons CO per rolling, 12-month period; and 82.97 tons VOC per rolling, 12-month period.
OAC rule 3745-17-07(A)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.c below.
OAC rule 3745-114-01	See sections C.4, C.5 and C.6 below.

2. Additional Terms and Conditions

2.a The following emissions units are vented to two RTO with one common stack: P005 (mash and yeast operations), P006 (fermentation), P007 (distillation process), P008 (DDGS dryer #1), P009 (DDGS dryer #2), P906 (DDGS handling and cooling) and J001 (denatured ethanol loading to truck and rail).

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

i. RTO for VOC and CO control. The RTO shall meet a minimum control efficiency of 90% for CO emissions and 98% for VOC emissions.

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 For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

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

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2. All emissions units vented to the RTO (see section A.2.a above) shall be shutdown when the RTO is not in operation.

3. Until compliance testing has been conducted, as required in this permit, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time when the emissions unit is in operation, shall be maintained at the average temperature recommended by the manufacturer of the oxidizers, with any modifications deemed necessary by the permittee. Following compliance testing, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emission test that demonstrated the emissions unit to be in compliance

C. Monitoring and/or Recordkeeping Requirements

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

2. The permittee shall install, operate, and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizers when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and calculate the average combustion temperature within the thermal oxidizers, each of the eight, 3-hour blocks of time during each day of operation, and shall record and maintain the following information each day:

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

   b. a log or record of the operating time for the capture (collection) system, thermal oxidizers, monitoring equipment, and the associated emissions unit.

   These records shall be maintained at the facility for a period of three years.

3. The permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx and VOC emissions.

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4. The permit to install for this emissions unit [P008] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetaldehyde
TLV (ug/m3): 33,195 (Converted from the STEL)
Maximum Hourly Emission Rate (lbs/hr): 0.94 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7.64
MAGLC (ug/m3): 790

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.38 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3.09
MAGLC (ug/m3): 4,190

Pollutant: ethanol
TLV (ug/m3): 1,884,253
Maximum Hourly Emission Rate (lbs/hr): 5.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 40.42
MAGLC (ug/m3): 44,863

Pollutant: acetic acid
TLV (ug/m3): 24,540
Maximum Hourly Emission Rate (lbs/hr): 2.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 16.10
MAGLC (ug/m3): 584.28

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.56 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.46
MAGLC (ug/m3): 42,156

Pollutant: methanol
TLV (ug/m3): 262,086
Maximum Hourly Emission Rate (lbs/hr): 0.36 (RTO stack)

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.88
MAGLC (ug/m3): 6,240.14

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 1.1 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 8.91
MAGLC (ug/m3): 42,934

5. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

   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.).

6. 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 toxic air 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) meet(s) the definition of a "modification" under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

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

D. Reporting Requirements

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

2. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within each RTO does not comply with the temperature limitation specified above. These 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 that specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

      Allowable emissions from the RTO (for emissions units specified in section A.2.a) shall not exceed the following:

      15 lbs/hr and 65.7 tons/yr of SO2; and
      6.8 lbs/hr and 29.78 tons/yr of PE.

      Applicable Compliance Methods:

      Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

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Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton.

b. Emission Limitations:

Allowable emissions from the RTO stack (for emissions units specified in section A.2.a) shall not exceed the following:

8.6 lbs/hr of NOx;
15 lbs/hr of CO;
26.9 lbs/hr of VOC;

37.8 tons of NOx per rolling, 12-month period;
65.7 tons of CO per rolling, 12-month period; and
82.97 tons of VOC per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the actual hours of operation per month and dividing by 2000 lbs/ton, to arrive at the tons per month emissions. The monthly emissions shall be added to the previous 11 months emissions to determine the rolling, 12-month total emissions.

c. Emission Limitation:

Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

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

2. 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 NOx, CO, VOC, SO2 and PE mass emission limitations from the RTO controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitations for CO and VOC from the RTO controlling this emissions unit.

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

Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;
Method 5 from 40 CFR Part 60, Appendix A for PE, total filterable particulate;
Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles;
Method 7e from 40 CFR Part 60, Appendix A for NOx;
Method 6c from 40 CFR Part 60, Appendix A for SO2;
Method 10 from 40 CFR Part 60, Appendix A for CO; and
Method 18, 25 or 25A from 40 CFR Part 60, Appendix A for VOC (following guidance provided in the Midwest Scaling Protocol). 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.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency (LAA).

d. The testing shall be conducted while the emissions unit and all emissions units vented to the RTO are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth LAA. The test shall be conducted at the inlet as well as the outlet of the control device for purposes of determining the efficiency of the control device.

e. During emission testing, the permittee shall also record the average combustion temperature within the RTO, in degrees Fahrenheit.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth LAA. 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 Portsmouth LAA refusal to accept the results of the emission test(s).

g. Personnel from the Portsmouth LAA 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.

h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth LAA 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 Portsmouth LAA.

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 operation(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) - 90 mmBtu/hr DDGS Dryer No. 2 controlled with Regenerative Thermal Oxidizers

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Allowable emissions from the regenerative thermal oxidizers (RTO) stack (for emissions units specified in section A.2.a below) shall not exceed the following: 8.6 lbs/hr of nitrogen oxides (NOx); 15 lbs/hr of carbon monoxide (CO); 26.9 lbs/hr of volatile organic compounds (VOC); 15 lbs/hr and 65.7 tons/yr of sulfur dioxide (SO2); and 6.8 lbs/hr and 29.78 tons/yr of particulate emissions (PE). The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and OAC rule 3745-21-08(B). Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average. See sections A.2.a and A.2.b below.
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Allowable emissions from the RTO stack (for emissions units specified in section A.2.a below) shall not exceed the following: 37.8 tons NOx per rolling, 12-month period; 65.7 tons CO per rolling, 12-month period; and 82.97 tons VOC per rolling, 12-month period.
OAC rule 3745-17-07(A)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.c below.
OAC rule 3745-114-01	See sections C.4, C.5 and C.6 below.

2. Additional Terms and Conditions

2.a The following emissions units are vented to two RTO with one common stack: P005 (mash and yeast operations), P006 (fermentation), P007 (distillation process), P008 (DDGS dryer #1), P009 (DDGS dryer #2), P906 (DDGS handling and cooling) and J001 (denatured ethanol loading to truck and rail).

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

i. RTO for VOC and CO control. The RTO shall meet a minimum control efficiency of 90% for CO emissions and 98% for VOC emissions.

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 For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

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

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2. All emissions units vented to the RTO (see section A.2.a above) shall be shutdown when the RTO is not in operation.

3. Until compliance testing has been conducted, as required in this permit, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time when the emissions unit is in operation, shall be maintained at the average temperature recommended by the manufacturer of the oxidizers, with any modifications deemed necessary by the permittee. Following compliance testing, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emission test that demonstrated the emissions unit to be in compliance

C. Monitoring and/or Recordkeeping Requirements

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

2. The permittee shall install, operate, and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizers when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and calculate the average combustion temperature within the thermal oxidizers, each of the eight, 3-hour blocks of time during each day of operation, and shall record and maintain the following information each day:

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

   b. a log or record of the operating time for the capture (collection) system, thermal oxidizers, monitoring equipment, and the associated emissions unit.

   These records shall be maintained at the facility for a period of three years.

3. The permittee shall maintain monthly records of the rolling, 12-month summation of CO, NOx and VOC emissions.

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4. The permit to install for this emissions unit [P009] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetaldehyde
TLV (ug/m3): 33,195 (Converted from the STEL)
Maximum Hourly Emission Rate (lbs/hr): 0.94 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7.64
MAGLC (ug/m3): 790

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.38 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3.09
MAGLC (ug/m3): 4,190

Pollutant: ethanol
TLV (ug/m3): 1,884,253
Maximum Hourly Emission Rate (lbs/hr): 5.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 40.42
MAGLC (ug/m3): 44,863

Pollutant: acetic acid
TLV (ug/m3): 24,540
Maximum Hourly Emission Rate (lbs/hr): 2.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 16.10
MAGLC (ug/m3): 584.28

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.56 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.46
MAGLC (ug/m3): 42,156

Pollutant: methanol
TLV (ug/m3): 262,086
Maximum Hourly Emission Rate (lbs/hr): 0.36 (RTO stack)

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.88
MAGLC (ug/m3): 6,240.14

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 1.1 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 8.91
MAGLC (ug/m3): 42,934

5. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

   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.).

6. 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 toxic air 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) meet(s) the definition of a "modification" under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

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

D. Reporting Requirements

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

2. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within each RTO does not comply with the temperature limitation specified above. These 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 that specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

      Allowable emissions from the RTO (for emissions units specified in section A.2.a) shall not exceed the following:

      15 lbs/hr and 65.7 tons/yr of SO2; and
      6.8 lbs/hr and 29.78 tons/yr of PE.

      Applicable Compliance Methods:

      Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

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Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton.

b. Emission Limitations:

Allowable emissions from the RTO stack (for emissions units specified in section A.2.a) shall not exceed the following:

8.6 lbs/hr of NOx;
15 lbs/hr of CO;
26.9 lbs/hr of VOC;

37.8 tons of NOx per rolling, 12-month period;
65.7 tons of CO per rolling, 12-month period; and
82.97 tons of VOC per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the actual hours of operation per month and dividing by 2000 lbs/ton, to arrive at the tons per month emissions. The monthly emissions shall be added to the previous 11 months emissions to determine the rolling, 12-month total emissions.

c. Emission Limitation:

Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

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

2. 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 NOx, CO, VOC, SO2 and PE mass emission limitations from the RTO controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitations for CO and VOC from the RTO controlling this emissions unit.

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

Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;
Method 5 from 40 CFR Part 60, Appendix A for PE, total filterable particulate;
Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles;
Method 7e from 40 CFR Part 60, Appendix A for NOx;
Method 6c from 40 CFR Part 60, Appendix A for SO2;
Method 10 from 40 CFR Part 60, Appendix A for CO; and
Method 18, 25 or 25A from 40 CFR Part 60, Appendix A for VOC (following guidance provided in the Midwest Scaling Protocol). 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.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency (LAA).

d. The testing shall be conducted while the emissions unit and all emissions units vented to the RTO are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth LAA. The test shall be conducted at the inlet as well as the outlet of the control device for purposes of determining the efficiency of the control device.

e. During emission testing, the permittee shall also record the average combustion temperature within the RTO, in degrees Fahrenheit.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth LAA. 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 Portsmouth LAA refusal to accept the results of the emission test(s).

g. Personnel from the Portsmouth LAA 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.

h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth LAA 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 Portsmouth LAA.

F. Miscellaneous Requirements

None

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

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P010) - Cooling Towers

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-11(B)	Particulate emissions (PE) shall not exceed 146.4 lbs/hr.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

i. the use of high efficiency drift eliminators (0.001%).

2.b For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

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 monitor the TDS content of the circulating cooling water on a monthly basis. The permittee shall maintain monthly records of the TDS content, in ppm.

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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 Limitation:

      Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

      Applicable Compliance Method:

      If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

   b. Emission Limitation**:**

      PE shall not exceed 146.4 lbs/hr.

      Applicable Compliance Method:

      Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying maximum circulating water flow rate (1.8 million gallons per hour) by the density of water (8.34 lb/gal), the percent drift (0.001%), and the maximum total dissolved solids content (2,500 ppm) of the cooling water and dividing by 1,000,000 (ppm).

      If required, the permittee shall submit a testing proposal to demonstrate that the maximum drift loss does not exceed 0.001 percent.

F. Miscellaneous Requirements

1. Construction of the air contaminant sources covered by this permit may not begin until the final, effective National Pollutant Discharge Elimination System (NPDES) permit is issued for this facility. This facility has applied for a NPDES permit which is identified as Ohio NPDES Permit No.: 0IN00259*AD/Federal Application No.: OH0135305.

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

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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) - 290 HP Diesel Fired Emergency Fire Water Pump

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Carbon monoxide (CO) emissions shall not exceed 0.19 ton per rolling, 12-month period. Nitrogen oxides (NOx) emissions shall not exceed 0.90 ton per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 0.07 ton per rolling, 12-month period. See sections A.2.a, A.2.b and B.2 below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-11(B)(5)(a)	Particulate emissions (PE) shall not exceed 0.310 lb/mmBtu actual heat input.
OAC rule 3745-18-06(G)	This emissions unit is exempt from the requirements of OAC rule 3745-18-06(G) in accordance with OAC rule 3745-18-06(B).
OAC rule 3745-21-08(B)	See section A.2.c below.

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 PE, CO, NOx, VOC and sulfur dioxide (SO2) emissions from this air contaminant source since the calculated annual emission rate for these pollutants is less than ten tons per year taking into account the federally enforceable restriction on the hours of operation under OAC rule 3745-31-05(C).

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

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i. 0.90 ton NOx per rolling, 12-month period;
ii. 0.19 ton CO per rolling, 12-month period; and
iii. 0.07 ton VOC per rolling, 12-month period.

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 emissions limitations established 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.d For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

1. The permittee shall only burn no. 2 fuel oil or diesel fuel with a sulfur content of 0.5% or less in this emissions unit.

2. The maximum annual hours of operation for this emissions unit shall not exceed 200 hours per year, based upon a rolling, 12-month summation of the operating hours. To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the levels specified in the following table:

Month(s)	Maximum Allowable Hours of Operation
1	40
1-2	80
1-3	120
1-4	160
1-5	200
1-6	200
1-7	200
1-8	200
1-9	200
1-10	200
1-11	200
1-12	200

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

C. Monitoring and/or Recordkeeping Requirements

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

   a. the hours of operation;

   b. the calculated monthly emission rate for CO;

   c. the calculated monthly emission rate for NOx;

   d. the calculated monthly emission rate for VOC;

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

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

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

2. The permittee shall maintain monthly records of the type and quantity of fuel and the sulfur content of the fuel burned in this emissions unit. For each day during which the permittee burns a fuel other than no. 2 fuel oil or diesel fuel in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned.

D. Reporting Requirements

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

   a. all exceedances of the rolling, 12-month operating hours restriction;

   b. all exceedances of the rolling, 12-month CO emission limitation;

   c. all exceedances of the rolling, 12-month NOx emission limitation;

   d. all exceedances of the rolling, 12-month VOC emission limitation;

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

f. all exceedances of the sulfur content fuel restriction specified in section B.1.

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

2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than no. 2 fuel oil or diesel fuel was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit annual reports that specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

0.19 ton CO per rolling, 12-month period
0.90 ton NOx per rolling, 12-month period
0.07 ton VOC per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the appropriate emission factor, in lb/hp-hr (from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1 (10/96)) by the maximum hp of the unit (290 hp).

If required, the permittee shall demonstrate compliance with these emission limitations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 7 for NOx, Method 6 for CO and Method 25 or 25A for VOC.

b. Emissions Limitation:

PE shall not exceed 0.310 lb/mmBtu actual heat input.

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Applicable Compliance Method:

This emission limitation is equivalent to the emission factor specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1 (10/96).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

c. Emissions Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

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 operation(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) - 3,740 HP Diesel Fired Emergency Generator

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Carbon monoxide (CO) emissions shall not exceed 2.06 tons per rolling, 12-month period. Nitrogen oxides (NOx) emissions shall not exceed 5.68 tons per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 0.26 ton per rolling, 12-month period. See sections A.2.a, A.2.b and B.2 below.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-11(B)(5)(b)	Particulate emissions (PE) shall not exceed 0.062 lb/mmBtu actual heat input.
OAC rule 3745-18-06(G)	Sulfur dioxide (SO2) emissions shall not exceed 0.5 lb/mmBtu actual heat input.
OAC rule 3745-21-08(B)	See section A.2.c below.

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 PE, CO, NOx, VOC and sulfur dioxide (SO2) emissions from this air contaminant source since the calculated annual emission rate for these pollutants is less than ten tons per year taking into account the federally enforceable restriction on the hours of operation under OAC rule 3745-31-05(C).

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

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i. 5.68 tons NOx per rolling, 12-month period;
ii. 2.06 tons CO per rolling, 12-month period; and
iii. 0.26 ton VOC per rolling, 12-month period.

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 emissions limitations established 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.d For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

1. The permittee shall only burn no. 2 fuel oil or diesel fuel with a sulfur content of 0.5% or less in this emissions unit.

2. The maximum annual hours of operation for this emissions unit shall not exceed 200 hours per year, based upon a rolling, 12-month summation of the operating hours. To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the levels specified in the following table:

Month(s)	Maximum Allowable Hours of Operation
1	40
1-2	80
1-3	120
1-4	160
1-5	200
1-6	200
1-7	200
1-8	200
1-9	200
1-10	200
1-11	200
1-12	200

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

C. Monitoring and/or Recordkeeping Requirements

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

   a. the hours of operation;

   b. the calculated monthly emission rate for CO;

   c. the calculated monthly emission rate for NOx;

   d. the calculated monthly emission rate for VOC;

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

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

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

2. The permittee shall maintain monthly records of the type and quantity of fuel and the sulfur content of the fuel burned in this emissions unit. For each day during which the permittee burns a fuel other than no. 2 fuel oil or diesel fuel in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned.

D. Reporting Requirements

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

   a. all exceedances of the rolling, 12-month operating hours restriction;

   b. all exceedances of the rolling, 12-month CO emission limitation;

   c. all exceedances of the rolling, 12-month NOx emission limitation;

   d. all exceedances of the rolling, 12-month VOC emission limitation;

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

f. all exceedances of the sulfur content fuel restriction specified in section B.1.

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

2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than no. 2 fuel oil or diesel fuel was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit annual reports that specify the total CO, NOx and VOC emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

2.06 tons CO per rolling, 12-month period
5.68 tons NOx per rolling, 12-month period
0.26 ton VOC per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the appropriate emission factor, in lb/hp-hr (from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1 (10/96) for CO and VOC, and from manufacturers guarantee, 0.0152 lb/hp-hr for NOx) by the maximum hp of the unit (290 hp).

If required, the permittee shall demonstrate compliance with these emission limitations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 7 for NOx, Method 6 for CO and Method 25 or 25A for VOC.

b. Emissions Limitation:

PE shall not exceed 0.062 lb/mmBtu actual heat input.

Applicable Compliance Method:

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This emission limitation is more stringent than the emission factor specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-1 (10/96).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

c. Emissions Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

d. Emissions Limitation:

SO2 emissions shall not exceed 0.5 lb/mmBtu actual heat input.

Applicable Compliance Method:

This emission limitation is equivalent to the emission factor in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-1 (10/96).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 6.

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 operation(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 (Leaks)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	See section A.2.a below. Volatile organic compounds (VOC) emissions shall not exceed 3.47 tons per rolling, 12-month period.
OAC rule 3745-21-09(DD)	See sections A.2.b and F.9 below.
OAC rule 3745-114-01	See sections C.13, C.14 and C.15 below.
40 CFR Part 60, Subpart VV	See sections below with references to 40 CFR Part 60.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a Leak Detection and Repair (LDAR) program, whenever this air contaminant source is in operation, as a voluntary restriction as proposed by the permittee. This restriction allows the permittee to avoid best available technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

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

2.c [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.

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2.d [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.e [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, 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.f [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).

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.

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

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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. i. Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm, and
   ii. 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. i. 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.
   ii. 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.
   iii. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

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

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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.

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

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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.

17. [60.482-3(i)]
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

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b. Is tested for compliance with paragraph (i)(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) 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.

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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.

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.

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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 autocatalytically 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.

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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; and

    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.

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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).

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

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greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent.

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 (i) 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)(i) 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.

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

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).

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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 Recordkeeping Requirements

1. [60.486] Record keeping requirements.
   a. Each owner or operator subject to the provisions of this subpart shall comply with the Recordkeeping 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 Recordkeeping requirements for these facilities in one Recordkeeping 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.

5. [60.486(e)]

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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(i)]
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.

12. The permittee shall maintain monthly records of the rolling, 12-month summation of VOC emissions from this emissions unit, in tons.

13. The permit to install for this emissions unit [P801] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC),

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calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetaldehyde
TLV (ug/m3): 33,195 (Converted from the STEL)
Maximum Hourly Emission Rate (lbs/hr): 0.0002
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.01
MAGLC (ug/m3): 790

Pollutant: hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lbs/hr): 0.04
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.91
MAGLC (ug/m3): 4,190

Pollutant: ethanol
TLV (ug/m3): 1,884,253
Maximum Hourly Emission Rate (lbs/hr): 0.79
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 58.24
MAGLC (ug/m3): 44,863

Pollutant: methanol
TLV (ug/m3): 262,086
Maximum Hourly Emission Rate (lbs/hr): 0.0002
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.01
MAGLC (ug/m3): 6,240.14

14. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

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

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

15. 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 toxic air 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) meet(s) the definition of a “modification” under other provisions of the rule, 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 the 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. [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).

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).

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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)(1),

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)(1) 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)(1), 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.

4. [60.487(d)]

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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.

7. The permittee shall submit annual reports which specify the total VOC, emissions in tons per rolling 12-month period from this emissions for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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.

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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(i), 60.482-4, 60.482-7(f), and 60.482-10(e) as follows:

   a. The requirements of paragraph (b) shall apply.

   b. Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

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)(1) 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.

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c. The fluid is a liquid at operating conditions.

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:

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); and

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:

where:

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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; and

Hi = net heat of combustion of sample component "i" at 25 ˚C and 760 mm Hg (77 ˚F and 14.7 psi), kcal/g-mole.

e. Method 18 and ASTM D2504-67, 77, or 88 (Reapproved 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 3.47 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)]

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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.

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.

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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)(1) 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.

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

Operations, Property, and/or Equipment - (P901) - Grain Receiving (truck and rail) controlled with a baghouse

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-07(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).
OAC rule 3745-17-08(B)	The permittee 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).
OAC rule 3745-17-11(B)	Particulate emissions (PE) shall not exceed 6.3 lbs/hr.
40 CFR Part 60, Subpart DD	See section A.2.b below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a baghouse, whenever this air contaminant source is in operation, with a minimum control efficiency of 95%, to control PE emissions, 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 40 CFR Part 60, Subpart DD (Standards of Performance for Grain Elevators), is applicable to grain elevators with a permanent grain storage capacity greater than 2.5 million U.S. bushels. The permanent grain storage capacity of this facility is 1,496,000 bushels. Therefore, 40 CFR Part 60, Subpart DD, is not applicable.

2.c For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

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B. Operational Restrictions

1. The amount of grain received by emissions units P901 (truck and rail grain receiving) and P902 (barge grain receiving), combined, shall not exceed 1,237,453 tons per rolling, 12-month period.

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 serving this emissions unit. The date and time of the visible emissions check and the presence or absence of any visible emissions shall be noted in an operations log. If visible 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 minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. The permittee shall maintain monthly records of the amount of grain received in this emissions unit and the total combined amount of grain received on a rolling, 12-month summation from emissions units P901 and P902.

D. Reporting Requirements

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

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2. The permittee shall submit annual reports that summarize the total annual amount of grain received, in tons, for this emissions unit and the total combined amount of grain received on a rolling, 12-month summation from emissions units P901 and P902. 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 these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

      Applicable Compliance Method:

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

   b. Emission Limitation:

      PE shall not exceed 6.3 lbs/hr.

      Applicable Compliance Method:

      Compliance shall be demonstrated by multiplying the maximum throughput (ton/hr) by the PM10 emission factor of 0.04 lb/ton (as verified by the emissions testing specified in section E.2. below) and the control efficiency of 95%.

2. 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 verify the PE emission factor established for this emission unit.

   c. The following test methods shall be employed: for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

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d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from the Portsmouth Local Air Agency 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.

g. 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 Portsmouth Local Air Agency 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 Portsmouth Local Air Agency.

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) - Grain Receiving (barge) controlled with a baghouse

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-11(B)	Particulate emissions (PE) shall not exceed 6.7 lbs/hr.
40 CFR Part 60, Subpart DD	See section A.2.b below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a grain unloader baghouse and grain receiving baghouse #1, whenever this air contaminant source is in operation, with a minimum control efficiency of 95%, to control PE emissions, 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 40 CFR Part 60, Subpart DD (Standards of Performance for Grain Elevators), is applicable to grain elevators with a permanent grain storage capacity greater than 2.5 million U.S. bushels. The permanent grain storage capacity of this facility is 1,496,000 bushels. Therefore, 40 CFR Part 60, Subpart DD, is not applicable.

2.c For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

B. Operational Restrictions

1. The amount of grain received by emissions units P901 (truck and rail grain receiving) and P902 (barge grain receiving), combined, shall not exceed 1,237,453 tons per rolling, 12-month period.

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 serving this emissions unit. The date and time of the visible emissions check and the presence or absence of any visible emissions shall be noted in an operations log. If visible 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 minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. The permittee shall maintain monthly records of the amount of grain received in this emissions unit and the total combined amount of grain received on a rolling, 12-month summation from emissions units P901 and P902.

D. Reporting Requirements

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

2. The permittee shall submit annual reports that summarize the total annual amount of grain received, in tons, for this emissions unit and the total combined amount of grain received on a rolling, 12-month summation from emissions units P901 and P902. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

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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:

      Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

      Applicable Compliance Method:

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

   b. Emission Limitation:

      PE shall not exceed 6.7 lbs/hr.

      Applicable Compliance Method:

      Compliance shall be demonstrated by multiplying the maximum throughput (ton/hr) by the PM10 emission factor of 0.034 lb/ton (as verified by the emissions testing specified in section E.2. below) and the control efficiency of 95%.

2. 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 verify the PE emission factor established for this emission unit.

   c. The following test methods shall be employed: for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

   d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

   e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from the Portsmouth Local Air Agency 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.

g. 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 Portsmouth Local Air Agency 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 Portsmouth Local Air Agency.

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 operation(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 - (P903) - Grain Handling and Storage controlled with baghouses

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-11(B)	Particulate emissions (PE) shall not exceed 9.7 lbs/hr.
40 CFR Part 60, Subpart DD	See section A.2.b below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in operation, with a minimum control efficiency of 95%, to control PE emissions, 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 baghouse system consists of the following: grain receiving baghouse #3, grain reclaim baghouse, milled grain baghouse #1, milled grain baghouse #2, storage silo #1 vent filter and storage silo #2 vent filter.

2.b 40 CFR Part 60, Subpart DD (Standards of Performance for Grain Elevators), is applicable to grain elevators with a permanent grain storage capacity greater than 2.5 million U.S. bushels. The permanent grain storage capacity of this facility is 1,496,000 bushels. Therefore, 40 CFR Part 60, Subpart DD, is not applicable.

2.c For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

B. Operational Restrictions

None

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The date and time of the visible emissions check and the presence or absence of any visible emissions shall be noted in an operations log. If visible 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 minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal 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 serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth Local Air Agency by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

   a. Emission Limitation:

      Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

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Applicable Compliance Method:

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

b. Emission Limitation:

PE shall not exceed 9.7 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrate based upon the emission testing specified in section E.2.

2. 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 allowable maximum outlet concentration for PE.

c. The following test methods shall be employed: for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency’s refusal to accept the results of the emission test(s).

f. Personnel from the Portsmouth Local Air Agency 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.

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g. 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 Portsmouth Local Air Agency 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 Portsmouth Local Air Agency.

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 operation(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 - (P904) - DDGS Loadout to truck and rail controlled with a baghouse

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-07(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).
OAC rule 3745-17-08(B)	The permittee 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).
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the voluntary emission limitation established pursuant to section A.2.a.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a baghouse, whenever this air contaminant source is in operation, with a outlet concentration of 0.005 gr/dscf, to control PE emissions, 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 For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

B. Operational Restrictions

None

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The date and time of the visible emissions check and the presence or absence of any visible emissions shall be noted in an operations log. If visible 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 minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal 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 serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth Local Air Agency by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

   a. Emission Limitation:

      Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

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Applicable Compliance Method:

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

b. Emission Limitation:

PE concentration of 0.005 gr/dscf of exhaust gases.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing specified in section E.2.

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

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the outlet concentration of 0.005 gr/dscf.

c. The following test methods shall be employed to demonstrate compliance with the voluntary emission limitation: for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

f. Personnel from the Portsmouth Local Air Agency 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

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procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency 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 Portsmouth Local Air Agency.

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 operation(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 - (P905) - DDGS Loadout to Barge controlled with a baghouse

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See section A.2.a below.
OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-07(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).
OAC rule 3745-17-08(B)	The permittee 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).
OAC rule 3745-17-11(B)	The emission limitation required by this applicable rule is less stringent than the voluntary emission limitation established pursuant to section A.2.a.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of a baghouse, whenever this air contaminant source is in operation, with a outlet concentration of 0.005 gr/dscf, to control PE emissions, 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 For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns.

B. Operational Restrictions

None

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The date and time of the visible emissions check and the presence or absence of any visible emissions shall be noted in an operations log. If visible 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 minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal 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 serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth Local Air Agency by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

   a. Emission Limitation:

      Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

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Applicable Compliance Method:

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

b. Emission Limitation:

PE shall not exceed 1.1 lbs/hr.
PE concentration of 0.005 gr/dscf of exhaust gases.

Applicable Compliance Method:

Compliance shall be demonstrated based on the baghouse design by multiplying the maximum baghouse outlet concentration of 0.005 gr/scf by the maximum volumetric air flow (3000 scf/min), and the appropriate conversion factors of 7000 gr/lb, 60 min/hr.

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

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the outlet concentration of 0.005 gr/dscf.

c. The following test methods shall be employed to demonstrate compliance with the voluntary emission limitation: for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth Local Air Agency.

d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth Local Air Agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. 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 Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).

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f. Personnel from the Portsmouth Local Air Agency 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.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency 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 Portsmouth Local Air Agency.

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 operation(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 - (P906) - DDGS Handling and Cooling controlled with a Baghouse and Regenerative Thermal Oxidizers

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Allowable emissions from the regenerative thermal oxidizers (RTO) stack (for emissions units specified in section A.2.a below) shall not exceed the following: 8.6 lbs/hr of nitrogen oxides (NOx); 15 lbs/hr of carbon monoxide (CO); 26.9 lbs/hr of volatile organic compounds (VOC); 15 lbs/hr and 65.7 tons/yr of sulfur dioxide (SO2); and 6.8 lbs/hr and 29.78 tons/yr of particulate emissions (PE). PE from the baghouse stack shall not exceed 0.39 lb/hr and 1.69 tons/yr. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and OAC rule 3745-21-08(B). Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average. Visible particulate emissions from the baghouse stack shall not exceed 10% opacity, as a 6-minute average. See sections A.2.a, A.2.b and A.2.c below.
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Allowable emissions from the RTO stack (for emissions units specified in section A.2.a below) shall not exceed the following: 37.8 tons of NOx per rolling, 12-month period; 65.7 tons of CO per rolling, 12-month period; and 82.97 tons of VOC per rolling, 12-month period.

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	See section A.2.b below.
OAC rule 3745-17-07(A)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
OAC rule 3745-21-08(B)	See section A.2.d below.
OAC rule 3745-114-01	See sections C.4, C.5 and C.6 below.

2. Additional Terms and Conditions

2.a The following emissions units are vented to two RTO with one common stack: P005 (mash and yeast operations), P006 (fermentation), P007 (distillation process), P008 (DDGS dryer #1), P009 (DDGS dryer #2), P906 (DDGS cooling) and J001 (denatured ethanol loading to truck and rail).

2.b Emissions associated with the cooling portion of this emissions unit are vented to a RTO. Emissions associated with the handling portion of this emissions unit are vented to a baghouse.

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

i. for cooling operations, RTOs for VOC and CO control. The RTOs shall meet a minimum control efficiency of 90% for CO emissions and 98% for VOC emissions.

ii. for handling operations, a baghouse with a maximum outlet concentration of 0.005 gr/dscf.

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

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However,

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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.e For the purposes of this permit, all PE is considered to be particulate matter less than 10 microns**.**

B. Operational Restrictions

1. All emissions units vented to the RTO (see section A.2.a above) shall be shutdown when the RTO is not in operation.

2. Until compliance testing has been conducted, as required in this permit, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time when the emissions unit is in operation, shall be maintained at the average temperature recommended by the manufacturer of the oxidizers, with any modifications deemed necessary by the permittee. Following compliance testing, the average combustion temperature within the thermal oxidizers, for any 3-hour block of time the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emission test that demonstrated the emissions unit to be in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall install, operate, and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizers when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and calculate the average combustion temperature within the thermal oxidizers, each of the eight, 3-hour blocks of time during each day of operation, and shall record and maintain the following information each day:

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

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b. a log or record of the operating time for the capture (collection) system, thermal oxidizers, monitoring equipment, and the associated emissions unit.

These records shall be maintained at the facility for a period of three years.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The date and time of the visible emissions check and the presence or absence of any visible emissions shall be noted in an operations log. If visible 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 rolling, 12-month summation of NOx, CO and VOC emissions for this emissions unit, in tons.

4. The permit to install for this emissions unit [P906] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the “worst case” pollutant(s):

   Pollutant: acetaldehyde
   TLV (ug/m3): 33,195 (Converted from the STEL)
   Maximum Hourly Emission Rate (lbs/hr): 0.94 (RTO stack)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 7.64
   MAGLC (ug/m3): 790

   Pollutant: hexane
   TLV (ug/m3): 176,000
   Maximum Hourly Emission Rate (lbs/hr): 0.38 (RTO stack)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3.09
   MAGLC (ug/m3): 4,190

   Pollutant: ethanol

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TLV (ug/m3): 1,884,253
Maximum Hourly Emission Rate (lbs/hr): 5.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 40.42
MAGLC (ug/m3): 44,863

Pollutant: acetic acid
TLV (ug/m3): 24,540
Maximum Hourly Emission Rate (lbs/hr): 2.0 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 16.10
MAGLC (ug/m3): 584.28

Pollutant: pentane
TLV (ug/m3): 1,770,000
Maximum Hourly Emission Rate (lbs/hr): 0.56 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.46
MAGLC (ug/m3): 42,156

Pollutant: methanol
TLV (ug/m3): 262,086
Maximum Hourly Emission Rate (lbs/hr): 0.36 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.88
MAGLC (ug/m3): 6,240.14

Pollutant: aliphatic hydrocarbon gases
TLV (ug/m3): 1,803,217
Maximum Hourly Emission Rate (lbs/hr): 1.1 (RTO stack)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 8.91
MAGLC (ug/m3): 42,934

5. Physical changes to or changes in the method of operation of the emissions unit after its 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 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists’ (ACGIH’s) handbook entitled “TLVs and BEIs” (“Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices”);

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

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

6. 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 toxic air 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) meet(s) the definition of a “modification” under other provisions of the rule, 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 the evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within each RTO does not comply with the temperature limitation specified above. These deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

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

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3. The permittee shall submit annual reports that specify the total CO, NOx, and VOC, emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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:

      Allowable emissions from the RTO stack (for emissions units specified in section A.2.a) shall not exceed the following:

      15 lbs/hr and 65.7 tons/yr of SO2; and
      6.8 lbs/hr and 29.78 tons/yr of PE.

      Applicable Compliance Methods:

      Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

      Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton.

   b. Emission Limitations:

      Allowable emissions from the RTO stack (for emissions units specified in section A.2.a) shall not exceed the following:

      8.6 lbs/hr of NOx;
      15 lbs/hr of CO; and
      26.9 lbs/hr of VOC.

      37.8 tons of NOx per rolling, 12-month period;
      65.7 tons of CO per rolling, 12-month period; and
      82.97 tons of VOC per rolling, 12-month period.

      Applicable Compliance Methods:

      Compliance with the hourly emission limitations shall be demonstrated based on emission testing performed in accordance with section E.2.

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Compliance with the annual emission limitations shall be demonstrated by multiplying the appropriate emission factor, in lbs/hr, established during the most recent emission test by the actual hours of operation per month and dividing by 2000 lbs/ton, to arrive at the tons per month emissions. The monthly emissions shall be added to the previous 11 months emissions to determine the rolling, 12-month total emissions.

c. Emission Limitation:

Visible particulate emissions from the RTO stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Methods:

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

d. Emission Limitation:

Visible particulate emissions from the baghouse stack shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Methods:

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

e. Emission Limitation:

PE from the baghouse stack shall not exceed 0.39 lb/hr and 1.69 tons/yr.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based on the baghouse design by multiplying the maximum baghouse outlet concentration of 0.005 gr/scf by the maximum volumetric air flow (9000 scf/min), and by the conversion factor of 60 min/hr, and then dividing by the conversion factor of 7000 gr/lb.

Compliance with the annual emission limitation shall be demonstrated by multiplying the lbs/hr emissions by 8760 hrs/yr and dividing by 2000 lbs/ton.

2. 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 NOx, CO, VOC, SO2 and PE mass emission limitations and the control efficiency limitations for CO and VOC from the RTO controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the PE allowable emission rate and the maximum outlet concentration of 0.005 gr/dscf from the baghouse controlling this emissions unit.

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

Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;
Method 5 from 40 CFR Part 60, Appendix A for PE, total filterable particulate;
Method 202 as set forth in the most recent update of 40 CFR Part 51, Appendix M for condensibles;
Method 7e from 40 CFR Part 60, Appendix A for NOx;
Method 6c from 40 CFR Part 60, Appendix A for SO2;
Method 10 from 40 CFR Part 60, Appendix A for CO; and
Method 18, 25 or 25A from 40 CFR Part 60, Appendix A for VOC (following guidance provided in the Midwest Scaling Protocol). 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.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Portsmouth LAA.

d. The testing shall be conducted while this emissions unit and all other emissions units vented to the RTO are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth LAA. The test shall be conducted at the inlet as well as the outlet of the control device for purposes of determining the efficiency of the control device.

e. During emission testing, the permittee shall also record the average combustion temperature within the RTO, in degrees Fahrenheit.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth LAA. 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 Portsmouth LAA refusal to accept the results of the emission test(s).

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g. Personnel from the Portsmouth LAA 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.

h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth LAA 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 Portsmouth LAA.

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 operation(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) - 100,000 gallon above ground internal floating roof storage tank (200 Proof Ethanol Tank No. 1)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Volatile organic compounds (VOC) emissions shall not exceed 0.34 tons per rolling, 12-month period. See section A.2.a below.
OAC rule 3745-21-09(L)	See section A.2.b below.
40 CFR Part 60, Subpart Kb	See sections A.2.c through A.2.n below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of an internal floating roof and a maximum annual material throughput of 59,000,000 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 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.c The fixed roof storage tank shall be equipped with an internal floating roof.

2.d 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.e 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.

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2.f 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.

2.g 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.h 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.i 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.j 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.

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2.k 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.l 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.m 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.n Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 59,000,000 gallons.

2. This above-ground storage tank shall only be used to store ethanol. The maximum true vapor pressure of the ethanol stored in this storage tank shall not exceed 0.754 pound per square inch absolute (psia).

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 Portsmouth Local Air Agency (Portsmouth LAA) 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 Portsmouth LAA; or

(d) Calculated by an appropriate method approved by the Portsmouth LAA.

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 Portsmouth LAA in the inspection report required in section D.3. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of

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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 section A.2.g.ii:

   a. The permittee shall visually inspect the vessel as specified in section C.5 at least every 5 years; or

   b. The permittee shall visually inspect the vessel as specified in section 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 sections C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in section C.4.a.

6. The owner or operator shall keep copies of all reports and records required in sections 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 sections 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 sections 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.

11. The permittee shall maintain monthly records of the rolling, 12-month summation of VOC emissions from this emission unit, in tons.

D. Reporting Requirements

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1. The permittee shall notify the Portsmouth LAA in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by sections C.2 and C.5 to afford the Portsmouth LAA the opportunity to have an observer present. If the inspection required by section 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 Portsmouth LAA 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 Portsmouth LAA at least 7 days prior to the refilling.

2. The permittee shall furnish the Portsmouth LAA with a report that describes the control equipment and certifies that the control equipment meets the specifications of sections A.2.f through A.2.n 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 section C.3 are detected during the annual visual inspection required by section C.3, a report shall be furnished to the Portsmouth LAA 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 section 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 section C.4.b, a report shall be furnished to the Portsmouth LAA within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of sections A.2.f through A.2.n 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 pound per square inch absolute, the permittee shall notify the Portsmouth LAA within 30 days of becoming aware of the occurrence.

6. The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

7. The permittee shall submit annual reports that specify the total VOC emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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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:

   VOC shall not exceed 0.34 ton per rolling, 12-month period.

   Applicable Compliance Method:

   The permittee shall demonstrate compliance 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 59,000,000 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 operation(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) - 100,000 gallon above ground internal floating roof storage tank (200 Proof Ethanol Tank No. 2)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Volatile organic compounds (VOC) emissions shall not exceed 0.34 ton per rolling, 12-month period. See section A.2.a below.
OAC rule 3745-21-09(L)	See section A.2.b below.
40 CFR Part 60, Subpart Kb	See sections A.2.c through A.2.n below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of an internal floating roof and a maximum annual material throughput of 59,000,000 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 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.c The fixed roof storage tank shall be equipped with an internal floating roof.

2.d 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.e 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.

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2.f 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.

2.g 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.h 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.i 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.j 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.

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2.k 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.l 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.m 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.n Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 59,000,000 gallons.

2. This above-ground storage tank shall only be used to store ethanol. The maximum true vapor pressure of the ethanol stored in this storage tank shall not exceed 0.754 pound per square inch absolute (psia).

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 Portsmouth Local Air Agency (Portsmouth LAA) 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 Portsmouth LAA; or

(d) Calculated by an appropriate method approved by the Portsmouth LAA.

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 Portsmouth LAA in the inspection report required in section D.3. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of

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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 section A.2.g.ii:

   a. The permittee shall visually inspect the vessel as specified in section C.5 at least every 5 years; or

   b. The permittee shall visually inspect the vessel as specified in section 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 section C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in section C.4.a.

6. The owner or operator shall keep copies of all reports and records required in sections 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 sections 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 sections 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

11. The permittee shall maintain monthly records of the rolling, 12-month summation of VOC emissions from this emissions unit, in tons.

D. Reporting Requirements

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1. The permittee shall notify the Portsmouth LAA in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by sections C.2 and C.5 to afford the Portsmouth LAA the opportunity to have an observer present. If the inspection required by section 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 Portsmouth LAA 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 Portsmouth LAA at least 7 days prior to the refilling.

2. The permittee shall furnish the Portsmouth LAA with a report that describes the control equipment and certifies that the control equipment meets the specifications of sections A.2.f through A.2.n 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 section C.3 are detected during the annual visual inspection required by section C.3, a report shall be furnished to the Portsmouth LAA 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 section 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 section C.4.b, a report shall be furnished to the Portsmouth LAA within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of sections A.2.f through A.2.n 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 pound per square inch absolute, the permittee shall notify the Portsmouth LAA within 30 days of becoming aware of the occurrence.

6. The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

7. The permittee shall submit annual reports that specify the total VOC emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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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:

   VOC shall not exceed 0.34 ton per rolling, 12-month period.

   Applicable Compliance Method:

   The permittee shall demonstrate compliance 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 59,000,000 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 operation(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) - 75,000 gallon above ground internal floating roof storage tank (Gasoline Denaturant Tank)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Volatile organic compounds (VOC) emissions shall not exceed 1.34 tons per rolling, 12-month period. See section A.2.a below.
OAC rule 3745-21-09(L)	See sections A.2.b through A.2.d and C.1 below.
40 CFR Part 60, Subpart Kb	See sections A.2.e through A.2.m below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of an internal floating roof and a maximum annual material throughput of 5,900,000 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.

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 5,900,000 gallons.

2. This above-ground storage tank shall only be used to store gasoline. The maximum true vapor pressure of the gasoline stored in this storage tank shall not exceed 11.11 pounds per square inch absolute (psia).

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 11.11 pound per square inch absolute. Available data on the storage temperature may be used to determine the maximum true vapor pressure as in the following:

      i. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

      ii. For refined petroleum products the vapor pressure may be obtained by the following:

         (a) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Portsmouth Local Air

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Agency (Portsmouth LAA) 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 Portsmouth LAA; or

(d) Calculated by an appropriate method approved by the Portsmouth LAA.

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, 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 Portsmouth Local Air Agency in the inspection report required in section D.3. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

4. For vessels equipped with a double-seal system as specified in section A.2.c.ii above:

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a. visually inspect the vessel as specified in section C.5 at least every 5 years; or

b. visually inspect the vessel as specified in section 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 sections C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in section C.4.a.

6. The owner or operator shall keep copies of all reports and records required in sections 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 sections 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 sections 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

11. The permittee shall maintain monthly records of the rolling, 12-month summation of VOC emissions from this emissions unit, in tons.

D. Reporting Requirements

1. The permittee shall notify the Portsmouth Local Air Agency (Portsmouth LAA) in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by sections C.2 and C.5 above to afford the Portsmouth LAA the opportunity to have an observer present. If the inspection required by section C.5 above is not planned and the permittee could not have known about the inspection 30 days in

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advance or refilling the tank, the permittee shall notify the Portsmouth LAA 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 Portsmouth LAA at least 7 days prior to the refilling.

2. The permittee shall furnish the Portsmouth LAA with a report that describes the control equipment and certifies that the control equipment meets the specifications of sections 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 section C.3 are detected during the annual visual inspection required by section C.3, a report shall be furnished to the Portsmouth LAA 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 section 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 section C.4.b, a report shall be furnished to the Portsmouth LAA within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of sections 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 Portsmouth LAA within 30 days of becoming aware of the occurrence.

6. The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

7. The permittee shall submit annual reports that specify the total VOC emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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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:

   VOC shall not exceed 1.34 tons per rolling, 12-month period.

   Applicable Compliance Method:

   The permittee shall demonstrate compliance 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 5,900,000 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 operation(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) - 1,000,000 gallon above ground internal floating roof storage tank (Denatured Ethanol Tank No. 1)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Volatile organic compounds (VOC) emissions shall not exceed 0.55 ton per rolling, 12-month period. See section A.2.a below.
OAC rule 3745-21-09(L)	See section A.2.b below.
40 CFR Part 60, Subpart Kb	See sections A.2.c through A.2.n below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of an internal floating roof and a maximum annual material throughput of 61,950,000 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 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.c The fixed roof storage tank shall be equipped with an internal floating roof.

2.d 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.e 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.

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2.f 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.

2.g 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.h 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.i 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.j 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.

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2.k 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.l 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.m 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.n Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 61,950,000 gallons.

2. This above-ground storage tank shall only be used to store denatured ethanol. The maximum true vapor pressure of the denatured ethanol stored in this storage tank shall not exceed 0.8301 pound per square inch absolute (psia).

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 0.8301 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 Portsmouth Local Air Agency (Portsmouth LAA) 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 Portsmouth LAA; or

(d) Calculated by an appropriate method approved by the Portsmouth LAA.

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 Portsmouth LAA in the inspection report required in section D.3. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of

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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 section A.2.g.ii:

   a. The permittee shall visually inspect the vessel as specified in section C.5 at least every 5 years; or

   b. The permittee shall visually inspect the vessel as specified in section 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 sections C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in section C.4.a.

6. The owner or operator shall keep copies of all reports and records required in sections 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 sections 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 sections 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.

11. The permittee shall maintain monthly records of the rolling, 12-month summation of VOC emissions from this emissions unit, in tons.

D. Reporting Requirements

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1. The permittee shall notify the Portsmouth LAA in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by sections C.2 and C.5 to afford the Portsmouth LAA the opportunity to have an observer present. If the inspection required by section 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 Portsmouth LAA 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 Portsmouth LAA at least 7 days prior to the refilling.

2. The permittee shall furnish the Portsmouth LAA with a report that describes the control equipment and certifies that the control equipment meets the specifications of sections A.2.f through A.2.n 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 section C.3 are detected during the annual visual inspection required by section C.3, a report shall be furnished to the Portsmouth LAA 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 section 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 section C.4.b, a report shall be furnished to the Portsmouth LAA within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of sections A.2.f through A.2.n 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 0.8301 pound per square inch absolute, the permittee shall notify the Portsmouth LAA within 30 days of becoming aware of the occurrence.

6. The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

7. The permittee shall submit annual reports that specify the total VOC emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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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:

   VOC shall not exceed 0.55 ton per rolling, 12-month period.

   Applicable Compliance Method:

   The permittee shall demonstrate compliance 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 61,950,000 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 operation(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) - 1,000,000 gallon above ground internal floating roof storage tank (Denatured Ethanol Tank No. 2)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C) (synthetic minor to avoid PSD and Title V)	Volatile organic compounds (VOC) emissions shall not exceed 0.55 ton per rolling, 12-month period. See section A.2.a below.
OAC rule 3745-21-09(L)	See section A.2.b below.
40 CFR Part 60, Subpart Kb	See sections A.2.c through A.2.n below.

2. Additional Terms and Conditions

2.a Permit to Install 07-00579 for this air contaminant source takes into account the use of an internal floating roof and a maximum annual material throughput of 61,950,000 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 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.c The fixed roof storage tank shall be equipped with an internal floating roof.

2.d 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.e 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.

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2.f 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.

2.g 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.h 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.i 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.j 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.

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2.k 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.l 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.m 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.n Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 61,950,000 gallons.

2. This above-ground storage tank shall only be used to store denatured ethanol. The maximum true vapor pressure of the denatured ethanol stored in this storage tank shall not exceed 0.8301 pound per square inch absolute (psia).

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 0.8301 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 Portsmouth Local Air Agency (Portsmouth LAA) 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 Portsmouth LAA; or

(d) Calculated by an appropriate method approved by the Portsmouth LAA.

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 Portsmouth LAA in the inspection report required in section D.3. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of

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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 section A.2.g.ii:

   a. The permittee shall visually inspect the vessel as specified in section C.5 at least every 5 years; or

   b. The permittee shall visually inspect the vessel as specified in section 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 sections C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in section C.4.a.

6. The owner or operator shall keep copies of all reports and records required in sections 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 sections 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 sections 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.

11. The permittee shall maintain monthly records of the rolling, 12-month summation of VOC emissions from this emissions unit, in tons.

D. Reporting Requirements

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1. The permittee shall notify the Portsmouth LAA in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by sections C.2 and C.5 to afford the Portsmouth LAA the opportunity to have an observer present. If the inspection required by section 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 Portsmouth LAA 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 Portsmouth LAA at least 7 days prior to the refilling.

2. The permittee shall furnish the Portsmouth LAA with a report that describes the control equipment and certifies that the control equipment meets the specifications of sections A.2.f through A.2.n 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 section C.3 are detected during the annual visual inspection required by section C.3, a report shall be furnished to the Portsmouth LAA 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 section 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 section C.4.b, a report shall be furnished to the Portsmouth LAA within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of sections A.2.f through A.2.n 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 0.8301 pound per square inch absolute, the permittee shall notify the Portsmouth LAA within 30 days of becoming aware of the occurrence.

6. The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

7. The permittee shall submit annual reports that specify the total VOC emissions in tons per rolling, 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

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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:

   VOC shall not exceed 0.55 ton per rolling, 12-month period.

   Applicable Compliance Method:

   The permittee shall demonstrate compliance 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 61,950,000 gallons.

F. Miscellaneous Requirements

None

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