John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

9/23/2013

Certified Mail

Stacy Schmidt
Andersons Marathon Ethanol LLC
PO Box 119
Maumee, OH 43537

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0819750245
Permit Number: P0110097
Permit Type: OAC Chapter 3745-31 Modification
County: Darke

Yes	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
Yes	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA)Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTI is a final action of the Director 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, made payable to “Ohio Treasurer Josh Mandel," 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
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging 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 Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Regional Air Pollution Control Agency at (937)225-4435 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
RAPCA; Indiana

FINAL

Division of Air Pollution Control
Permit-to-Install
for
Andersons Marathon Ethanol LLC

Facility ID:	0819750245
Permit Number:	P0110097
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	9/23/2013
Effective:	9/23/2013

Division of Air Pollution Control
Permit-to-Install
for
Andersons Marathon Ethanol LLC

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Authorization

Facility ID:	0819750245
Facility Description:	Ethanol Fuel Production
Application Number(s):	A0044447
Permit Number:	P0110097
Permit Description:	Chapter 31 modification increasing material throughput and emissions of ethanol production facility transitioning to Title V due to level of NOx emissions. Permit includes restrictions limiting emissions of criteria air pollutants to avoid major New Soucre Review, and to maintain emissions of Hazardous Air Pollutants below major status.
Permit Type:	OAC Chapter 3745-31 Modification
Permit Fee:	$25,375.00
Issue Date:	9/23/2013
Effective Date:	9/23/2013

This document constitutes issuance to:

Andersons Marathon Ethanol LLC
5278 SEBRING WARNER RD
Greenville, OH 45331

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Regional Air Pollution Control Agency
117 South Main Street
Dayton, OH 45422-1280
(937)225-4435

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the 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

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0110097
Permit Description: Chapter 31 modification increasing material throughput and emissions of ethanol production facility transitioning to Title V due to level of NOx emissions. Permit includes restrictions limiting emissions of criteria air pollutants to avoid major New Soucre Review, and to maintain emissions of Hazardous Air Pollutants below major status.

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

Emissions Unit ID:	**F001**
Company Equipment ID:	Roadways
Superseded Permit Number:	P0104717
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F002**
Company Equipment ID:	Grain Dryer
Superseded Permit Number:	P0107359
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**J001**
Company Equipment ID:	Loadout Rack
Superseded Permit Number:	P0107359
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P006**
Company Equipment ID:	Fermentation Units
Superseded Permit Number:	P0108289
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P012**
Company Equipment ID:	Cooling Towers
Superseded Permit Number:	P0104717
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P013**
Company Equipment ID:	Methanators
Superseded Permit Number:	P0108197
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P801**
Company Equipment ID:	Equipment Leaks
Superseded Permit Number:	P0104717
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P901**
Company Equipment ID:	Grain Receiving (Truck and Rail), Handling and Storage
Superseded Permit Number:	P0107359
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P902**
Company Equipment ID:	DDGS Handling & Cooling
Superseded Permit Number:	P0108197
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	**P903**
Company Equipment ID:	DDGS Loadout
Superseded Permit Number:	P0104717
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P904**
Company Equipment ID:	4 Steel Storage Bins & Drying Bin
Superseded Permit Number:	P0104279
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T003**
Company Equipment ID:	Gasoline Tank
Superseded Permit Number:	P0107359
General Permit Category and Type:	Not Applicable

Group Name: Cook, Yeast, Distill & Deyhdrate

Emissions Unit ID:	**P005**
Company Equipment ID:	Mash & Yeast Operations
Superseded Permit Number:	P0108197
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P007**
Company Equipment ID:	Distillation
Superseded Permit Number:	P0108197
General Permit Category andType:	Not Applicable

Group Name: DDGS Dryers

Emissions Unit ID:	**P008**
Company Equipment ID:	DDGS Dryer #1
Superseded Permit Number:	P0108197
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P009**
Company Equipment ID:	DDGS Dryer #2
Superseded Permit Number:	P0108197
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P010**
Company Equipment ID:	DDGS Dryer #3
Superseded Permit Number:	P0108197
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P011**
Company Equipment ID:	DDGS Dryer #4
Superseded Permit Number:	P0108197
General Permit Category andType:	Not Applicable

Group Name: Ethanol Storage Tanks

Emissions Unit ID:	**T001**
Company Equipment ID:	190 Proof Ethanol Tank
Superseded Permit Number:	P0107359
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**T002**
Company Equipment ID:	200 Proof Ethanol Tank
Superseded Permit Number:	P0104717
General Permit Category andType:	Not Applicable

Emissions Unit ID:	**T004**
Company Equipment ID:	Denatured Ethanol Tank #1
Superseded Permit Number:	P0107359
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**T005**
Company Equipment ID:	Denatured Ethanol Tank #2
Superseded Permit Number:	P0107359
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**T006**
Company Equipment ID:	Denatured Ethanol Tank #3
Superseded Permit Number:	P0107359
General Permit Category andType:	Not Applicable

Group Name: Grain Hammermills

Emissions Unit ID:	**P001**
Company Equipment ID:	Hammermill #1
Superseded Permit Number:	P0104717
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P002**
Company Equipment ID:	Hammermill #2
Superseded Permit Number:	P0104717
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P003**
Company Equipment ID:	Hammermill #3
Superseded Permit Number:	P0104717
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P004**
Company Equipment ID:	Hammermill #4
Superseded Permit Number:	P0104717
General Permit Category andType:	Not Applicable

Group Name: RTO/Waste Heat Recovery Boilers

Emissions Unit ID:	**B001**
Company Equipment ID:	145 MMBtu/hr RTO/WHRB #1
Superseded Permit Number:	P0108197
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**B002**
Company Equipment ID:	145 mmBtu/hr RTO/WHRB #2
Superseded Permit Number:	P0108197
General Permit Category andType:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A.2.a), Severability Clause

(2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements

(3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A.9., Reporting Requirements

(5) Standard Term and Condition A.10., Applicability

(6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A.14., Public Disclosure

(8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A.16., Fees

(10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) 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 or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

b) 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.

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Regional Air Pollution Control Agency.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Regional Air Pollution Control Agency. The written 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. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, andreportingrequirements contained in this permit shall be submitted (i.e., postmarked) to the Regional Air Pollution Control Agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

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, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Regional Air Pollution Control Agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

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

b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

d) The permittee shall submit progress reports to the Regional Air Pollution Control Agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Regional Air Pollution Control 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 state-only required 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 Regional Air Pollution Control 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.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit 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.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. 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.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as “permanently shut down” in Ohio EPA’s “Air Services” along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

a) Completion of initial installation date shall be enteredupon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. 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.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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 quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. 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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the “Owner/Contact Change” functionality in Air Services once the transfer is legally completed.The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

2. This permit establishes the following federally enforceable limitations for the purpose of avoiding Prevention of Significant Deterioration (PSD) for nitrogen oxides (NO_x).

   The combined NO_x emissions from the emissions units identified below shall not exceed the rolling 12-month limitations listed in the following table:

	Emissions Unit Identification Numbers	Process Descriptions	Emissions Limitation Applies	Rolling 12-Month NO_x Emissions Limitation (tons)	Rolling 12-Month Production Limitation
a.	B001, B002, P005, P007, P008, P009, P010, P011, P013 and P902	RTO/waste heat recovery boilers, methanators, DDGS cooling & handling	Stack S10	214.62	488,000 tons dried distillers grain solubles (DDGS) production
b.	J001	Loadout Rack	Loadout flare Stack S50	4.31	154,000,000 gallons denatured ethanol and E-85 processed
c.	F002	Grain Dryer	Grain Dryer	7.50	560,000 tons grain throughput
d.	P013	Methanators	Methanator flare Stack S60	1.97	None. Emissions limitation reflects potential to emit.

   The permittee shall collect and record the following information each month for each of the emissions unit group listed in a. through d. in the table above:

   a) The NOx emissions for emissions unit group, in tons, (calculated in accordance with the applicable compliance methods specified in the terms and conditions for emissions unit contained in C. Emissions Unit Terms and Conditions according to the applicable PTIO for each emissions unit);

   b) The rolling 12-month NOx emissions for each emissions unit group, in tons, (the sum of the NOx emissions calculated according to a) for the previous 12-months).

   c) The combined NOx emissions during the rolling 12-month period, in tons, for all emissions unit groups (the sum of the NOx emissions calculated according to b) for the previous 12-months).

3. The NO_x emissions for the facility shall not exceed 229.26 tons per year, based upon a rolling, 12-month summation of the monthly emissions. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Emissions of NOx (Tons)
1	19.11
1-2	38.21
1-3	57.31
1-4	76.42
1-5	95.53
1-6	114.63
1-7	133.74
1-8	152.84
1-9	171.95
1-10	190.05
1-11	210.16
1-12	229.26

After the first 12 calendar months following the issuance of this permit, compliance with the annual emissions limitation for NO_x shall be based upon a rolling, 12-month summation of the monthly emissions. The permittee shall calculate and maintain monthly records of the NO_x emissions and the rolling 12-month emissions of NO_x. Compliance shall be based upon the record keeping requirements specified in B.3. and in accordance with the applicable compliance methods specified in Section C. Emissions Unit Terms and Conditions for each emissions unit. NOx emissions from any insignificant or De Minimis emission units operating at the facility shall be included in the determination of the facility NOx emissions.

4. This permit establishes the following federally enforceable limitations on emissions of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, for the purpose of avoiding Maximum Achievable Control Technology (MACT) regulations.

   The actual emissions from emissions units B001, B002, F002, P005, P006, P007, P008, P009, P010, P011, P013, P014, P801, P902, J001, T001, T002, T003, T004,T005, T006 andincluding any De Minimis emissions units as defined in OAC rule 3745-15-05, registration status emission units, permit exempt, and permit-by-rule emissions units pursuant to OAC rule 3745-31-03, shall not exceed 9.9 tons for any single HAP or 24.9 tons for all HAPs combined, based upon a rolling, 12-month summation.

5. The permittee shall submit quarterly deviation (excursion) reports that identify:

   a) all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

      (1) any exceedances of the rolling, 12-month NOx emissions limitations listed for the emissions unit groups listed in Table 2.a. through 2.d.,

      (2) any exceedance of the rolling, 12-month NOx emissions limitation for the facility,

      (3) any exceedance of the rolling, 12-month individual HAP emission limitation for each HAP; and

      (4) any exceedance of the rolling, 12-month total combined HAPs emission limitation.

      If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

   The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

C. Emissions Unit Terms and Conditions

1. F001, Roadways

Operations, Property and/or Equipment Description:

Paved Roadways and Parking Areas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)c.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Particulate Emissions (PE) shall not exceed 35.21 tons per year (TPY). There shall be no visible PE except for one minute during any 60-minute period. The permittee shall implement best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)a through b)(2)f.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Emissions of particulate matter less than 10 microns in diameter (PM_{10}) shall not exceed 7.04 tons/year. See b)(2)g.
c.	OAC rule 3745-31-05(A)(3)(b),as effective 12/01/06	See b)(2)h.
d.	OAC rule 3745-17-07(B)	This emissions unit is exempt from the fugitive visible PE limitations as specified in this rule pursuant to OAC rule 3745-17-07(B)(11)(e).
e.	OAC rule 3745-17-08(B)	The facility 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 this rule.

(2) Additional Terms and Conditions

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

Paved Roadways:

All

Paved Parking Areas:

All

b. The permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permit application, the permittee has committed to treat the paved roadways and parking areas by sweeping and/or watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

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

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

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

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

g. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule

revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

h. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 37-31-05(A)(3) do not apply to PM10 emissions from this air contaminant source since the uncontrolled potential to emit for PM10 is less than 10 tons/year.

i. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) None.

d) 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 d)(3)d shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

(4) The permittee shall record the number of trucks entering the plant site and their respective weights on a daily basis.

e) 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 Standard Terms and Conditions of this permit.

(3) The permittee shall submit annual reports which specify the total PE, PM_{10} emissions, in tons per year, from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

There shall be no visible particulate emissions except for one minute during any 60-minute period.

<u>Applicable Compliance Method:</u>

Compliance with the visible emission limitation listed above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

b. Emission Limitation:

PE shall not exceed 35.21 TPY.

Applicable Compliance Method:

Compliance shall be calculated using calculations and equation (2) in AP-42, Section 13.2.1.3 (January 2011) and inputs representing the Potential To Emit (PTE), as follows:

$E = [k (sL)^{0.91} \times W^{1.02}](1-P/4N)$

Where

E = emission factor (lb/VMT)

k = particle size multiplier = 0.011

sL = silt content of road surface material, in g/m^2 = 1.59 (80% control applied)

W = mean vehicle weight, in tons = 27.1

P = number of wet days per averaging period with at least 0.01 inch of precipitation = 140

N = number of days per averaging period = 365

Using the equation and input values above:

E = 0.439 lb PE/vehicle mile traveled (VMT)

Using the AP-42 emission factor and the maximum annual VMT:

PE = (0.439 lb/VMT)(160,340 VMT/yr)(0.0005 ton/lb)

PE = 35.21 tons/year.

c. Emission Limitation:

PM_{10} emissions shall not exceed 7.04 TPY.

Applicable Compliance Method:

Compliance shall be calculated using calculations and equation (2) in AP-42, Section 13.2.1.3 (January 2011) and inputs representing the Potential To Emit (PTE), as follows:

$E = [k (sL)^{0.91} \times W^{1.02}](1-P/4N)$

Where

E = emission factor (lb/VMT)

k = particle size multiplier = 0.0022

sL = silt content of road surface material, in g/m^2 = 1.59 (80% control applied)

W = mean vehicle weight, in tons = 27.1

P = number of wet days per averaging period with at least 0.01 inch of precipitation = 140

N = number of days per averaging period = 365

Using the equation and input values above:

E = 0.0878 lb PM_{10}/vehicle mile traveled (VMT)

Using the AP-42 emission factor and the maximum annual VMT:

PM_{10} = (0.0878 lb/VMT)(160,340 VMT/yr)(0.0005 ton/lb)

PM_{10} = 7.04 tons/year.

g) Miscellaneous Requirements

(1) None.

2. F002, Grain Dryer

Operations, Property and/or Equipment Description:

65 mmBtu/hr Column Grain Dryer

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Carbon monoxide (CO) emissions from this emissions unit shall not exceed 5.46 lbs/hr and 6.30 tons per rolling 12 month period. Nitrogen oxide (NO_X) emissions from this emissions unit shall not exceed 6.5 lbs/hr and 7.50 tons per rolling 12 month period. Emissions of particulate matter less than 10 microns in diameter (PM_{10}) from this emissions unit shall not exceed 6.04 lbs/hr and 6.73 tons per rolling 12 month period. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b.
c.	ORC 3704.03(T)	PE from this emissions unit shall not exceed 25.21 tons per rolling 12-month period.
d.	OAC rule 3745-31-05(E) (voluntary restrictions to avoid BAT for CO and PM_{10})	Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 6.30 tons per rolling 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Emissions of PM_{10} from this emissions unit shall not exceed 6.73 tons per rolling 12-month period. See b)(2)b.
e.	OAC rule 3745-31-05(D) (synthetic minor to avoid Prevention of Significant Deterioration (PSD) for NO_x)	NO_x emissions from this emissions unit shall not exceed 7.50 tons per rolling 12-month period. See c)(2). See B.2. and B.3 in Section B. Facility-Wide Terms and Conditions.
f.	OAC rule 3745-17-07(B)	This emissions unit is exempt from the fugitive visible PE limitations specified in this rule pursuant to OAC rule 3745-17-07(B)(11)(e).
g.	OAC rule 3745-17-08(B)	The facility 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 this rule.
h.	OAC rule 3745-18-06	This emissions unit is exempt from the requirements of this rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
i.	40 CFR Part 60, Subpart DD - Standards of Performance for Grain Elevators	Per 40 CFR 60.302(a), no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere any gases which exhibit greater than 0 percent opacity from any column dryer with a column plate perforation exceeding 2.4 mm diameter (0.094 inch). This grain dryer F002 does not have column plate perforations exceeding this size, therefore, the visible emissions limitation does not apply.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that

BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for CO, NO_x, and PM_{10} emissions 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 grain throughput rate for this emissions unit shall not exceed 560,000 tons per rolling 12-month period.[OAC rule 3745-31-05(D)]

ii. The annual natural gas usage in this emissions unit shall not exceed 150 million cubic feet (mmcf) per rolling 12-month period year. [OAC rule 3745-31-05(D)]

iii. The NO_x emissions from this emissions unit shall not exceed 7.50 tons per rolling 12-month period. [OAC rule 3745-31-05(D)]

iv. The CO emissions from this emissions unit shall not exceed 6.30 tons per rolling 12-month period. [OAC rule 3745-31-05(E)]

v. The emissions of PM_{10} from this emissions unit shall not exceed and 6.73 tons per rolling 12-month period. [OAC rule 3745-31-05(E)]

c. This emissions unit consists of the grain dryer only. Grain material handling operations with the grain dryer, which are controlled by a baghouse venting to Stack S-22, are included with emissions unit P901.

d. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) The grain throughput rate for this emissions unit shall not exceed 560,000 tons per rolling 12-month period.

(2) The natural gas usage in this emissions unit shall not exceed 150 mmcf per rolling 12-month period

(3) The permittee shall only burn natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

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

a. the grain throughput rate, in tons;

b. the natural gas usage, in mmcf;

c. the PE, PM_{10}, $NO_{X,}$ and CO emissions, in tons;

d. the rolling, 12-month summation of the grain throughput, in tons;

e. the rolling, 12-month summation of the natural gas usage, in mmcf; and

f. the rolling, 12-month summation of PE, PM_{10}, $NO_{X,}$, and CO emissions, in tons.

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

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports to the Director (the appropriate District Office or local air agency) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all exceedances of the rolling, 12-month summation of the grain throughput limitation;

b. all exceedances of the rolling, 12-month summation of the natural gas usage limitation; and

c. all exceedances of the rolling, 12-month summation of PE, PM_{10}, NO_X, and CO emissions limitations.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(3) The permittee shall submit annual reports which specify the total PE, PM_{10}, NO_X and CO emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

PE from this emissions unit shall not exceed 25.21 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(1) and shall be calculated using emission factors from AP-42 Table 1.4-2 (July 1998) for the combustion emissions and AP-42 Table 9.9.1-1 (March 2003) for the grain dryer emissions, as follows:

Emissions = Combustion Emissions + Grain Emissions

Combustion Emissions = (fuel usage mmcf per rolling 12-month period) * (emission factor lb/mmcf) * 1.0 ton/2,000 lbs

Combustion Emissions = (fuel usage in mmcf per rolling 12-month period) * (7.6 lb/mmcf) * 1.0 ton/2,000 lbs

Grain Emissions = (grain throughput tons per rolling 12-month period) * (emission factor) * (1 - control efficiency of column) * 1.0 ton/2,000 lbs

Grain Emissions = (grain throughput in tons grain per rolling 12-month period) * (0.22 lb PE/ton) * (1 - .60) * 1.0 ton/2,000 lbs

b. Emissions Limitation:

CO emissions from this emissions unit shall not exceed 5.46 lbs/hr.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor from AP-42 Table 1.4-1 (July 1998) times the maximum hourly natural gas usage as follows:

Emissions = (maximum natural gas usage mmcf) * (emission factor lb/mmcf)

Emissions = (0.065 mmcf/hr) * (84 lb/mmcf)

Emissions = 5.46 lbs/hr

The hourly CO emissions limitation was based on the information and data in the application submitted by the permittee and reflects the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this short term emissions limitation.

c. Emissions Limitation:

CO emissions from this emissions unit shall not exceed 6.30 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(1) and shall be calculated using emission factors from AP-42 Table 1.4-1 (July 1998) as follows:

Emissions = (fuel usage) * (emission factor) * 1.0 ton/2,000 lbs

Emissions = (fuel usage in mmcf per rolling 12-month period) * (84 lb/mmcf) * 1.0 ton/2,000 lbs

d. Emissions Limitation:

NO_X emissions from this emissions unit shall not exceed 6.5 lbs/hr.

Applicable Compliance Method:

Compliance shall be determined multiplying the emission factor from AP-42 Table 1.4-1 (July 1998) times the maximum hourly natural gas usage as follows:

Emissions = (maximum natural gas usage mmcf) * (emission factor lb/mmcf)

Emissions = (0.065 mmcf/hr) * (100 lb/mmcf)

Emissions = 6.5 lbs/hr

The hourly NO_x emissions limitation was based on the information and data in the application submitted by the permittee and reflects the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this short term emissions limitation.

e. Emissions Limitation:

NO_X emissions from this emissions unit shall not exceed 7.50 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(1) and shall be calculated using emission factors from AP-42 Table 1.4-1 (July 1998) as follows:

Emissions = (fuel usage mmcf) * (emission factor lb/mmcf) * 1.0 ton/2,000 lbs

Emissions = (fuel usage in mmcf per rolling 12-month period) * (100 lb/mmcf) * 1.0 ton/2,000 lbs

f. Emissions Limitation:

PM_{10} emissions from this emissions unit shall not exceed 6.04 lbs/hr.

Applicable Compliance Method:

Compliance shall be determined by adding the natural gas combustion emissions plus the grain emissions. The combustion emissions shall be determined by multiplying the emission factor from AP-42 Table 1.4-2 (July 1998) times the maximum hourly natural gas usage, and the grain emissions shall be determined by multiplying the emission factor from AP-42 Table 9.9.1-1 (March 2003) times the maximum hourly grain processing rate times 1 minus the grain dryer control efficiency as follows:

Emissions = Combustion Emissions + Grain Emissions

Combustion Emissions = (maximum dryer natural gas usage mmcf) * (emission factor lb/mmcf)

Combustion Emissions = (0.065 mmcf/hr) * (7.6 lb/mmcf)

Combustion Emissions = 0.494 lb/hr

Grain Emissions = (maximum grain processing rate ton/hr) * (emission factor lb/ton) * (1 - control efficiency of column)

Grain Emissions = (252 tons/hr) * (0.055 lb PM_{10}/ton * (1-0.60)

Grain Emissions = 5.54 lbs/hr

Emissions = 0.494 + 5.54 = 6.04 lbs/hr

The hourly PM_{10} emissions limitation was based on the information and data in the application submitted by the permittee and reflects the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this short term emissions limitation.

g. Emissions Limitation:

PM_{10} emissions from this emissions unit shall not exceed 6.73 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(1) and shall be calculated using emission factors from AP-42 Table 1.4-2 (July 1998) for the combustion emissions and AP-42 Table 9.9.1-1 (March 2003) for the grain dryer emissions, as follows:

Emissions = Combustion Emissions + Grain Emissions

Combustion Emissions = (fuel usage mmcf) * (emission factor lb/mmcf) * 1.0 ton/2,000 lbs

Combustion Emissions = (fuel usage in mmcf per rolling 12-month period) * (7.6 lb/mmcf) / (2,000 lbs/ton)

Grain Emissions = (grain throughput tons per rolling 12-month period) * (emission factor lb/ton) * 1.0 ton/2,000 lbs

Grain Emissions = (grain throughput in tons grain per rolling 12-month period) * (0.055 lb PM_{10}/ton) * 1.0 ton/2,000 lbs

g) Miscellaneous Requirements

(1) None.

3. J001, Loadout Rack

Operations, Property and/or Equipment Description:

Denatured Ethanol Loading Rack Controlled with a Flare

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)b. and b)(1)e.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Carbon monoxide (CO) emissions from the flare associated with this emissions unit shall not exceed 9.11 lbs/hr and 7.16 tons per rolling 12 month period. Nitrogen oxide (NO_X) emissions from the flare associated with this emissions unit shall not exceed 5.47 lbs/hr and 4.31 tons per rolling 12 month period. See b)(2)f., b)(2)h. and b)(2)i.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)g.
c.	ORC 3704.03(T)	The VOC emissions from this emissions unit shall not exceed 16.79 tons per rolling 12-month period. See b)(2)a through b)(2)e, b)(2)i, c)(1) and c)(2).
d.	OAC rule 3745-31-05(D), (synthetic minor to avoid PSD for NO_x)	NO_x emissions from the flare associated with this emissions unit shall not exceed 4.31 tons per rolling 12-month period. See b)(2)g., c)(1) and c)(2). See B.2. and B.3 in Section B. Facility-Wide Terms and Conditions.
e.	ORC 3704.03(F) and OAC rule 3745-114-01	See d)(3), d)(4) and e)(2).

(2) Additional Terms and Conditions

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

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

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

d. A vapor tight lid shall be placed onto the truck's fill point before loading operations.

e. The vapor head space in the truck's tank shall be evacuated through a solid vapor line then routed to the flare.

f. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

g. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for CO and NO_x emissions 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 amount of denatured ethanol and E-85 processed through this emissions unit shall not exceed 154,000,000 gallons, for any rolling, 12-month period. [OAC rule 3745-31-05(D)]

ii. A closed vent system shall be operated at all times, when emissions unit is in operation, to collect emissions and the emissions shall be vented the flare and operated in compliance with the restrictions specified in c) below. [OAC rule 3745-31-05(D)]

iii. The CO emissions from the flare associated with this emissions unit shall not exceed 7.16 tons per rolling 12-month period. [OAC rule 3745-31-05(D)]

iv. The NOx emissions from the flare associated with this emissions unit shall not exceed 4.31 tons per rolling 12-month period.[OAC rule 3745-31-05(D)]

h. The hourly CO, NO_x, VOC emissions limitations reflect the potential to emit for this emissions unit. It is not necessary for the permittee to perform monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

i. The annual CO, NO_x, and VOC emissions limitations reflects the worst-case maximum emissions that occur when the total amount of denatured ethanol and E-85 production processed through this emissions unit is loaded and shipped by truck.

j. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) The amount of denatured ethanol and E-85 processed through this emissions unit shall not exceed 154,000,000 gallons, for any rolling, 12-month period, of the denatured ethanol and E-85 production.

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

a. the closed vent system shall be operated at all times, when emissions unit is in operation, to collect emissions and shall be vented the flare;

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

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 (DD)(10)(d) of rule 3745-21-09 of the Administrative Code; and,

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

d) Monitoring and/or Recordkeeping Requirements

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

a. the amount of denatured ethanol and E-85 loaded into railcars;

b. the amount of denatured ethanol and E-85 loaded into trucks;

c. the amount of denatured ethanol and E-85 processed [i.e., d)(1)a + d)(1)b];

d. the VOC and NO_X emissions, in tons;

e. the rolling, 12-month summation of the denatured ethanol production; and

f. the rolling, 12-month summation of VOC and NO_X emissions, in tons.

(2) The permittee shall comply with the following monitoring and recordkeeping 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 record all periods of time during which there was no pilot flame or the flare was inoperable when the emissions unit was in operation.

(3) The permit to install for this emissions unit was evaluated based on the actual materials and the design parameters of with this emissions unit and the associated flare control exhaust, 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: Toluene

TLV (mg/m^3): 188.4

Maximum Hourly Emission Rate (lbs/hr): 3.53

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 131.76

MAGLC (µg/m3): 4,486

Pollutant: Xylene

TLV (mg/m^3): 434.19

Maximum Hourly Emission Rate (lbs/hr): 2.83

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 105.57

MAGLC (µg/m^3): 10,338

Pollutant: Methyl tert-Butyl Ether (MTBE)

TLV (mg/m^3): 180.31

Maximum Hourly Emission Rate (lbs/hr): 1.77

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 66.52

MAGLC (µg/m^3): 4,293

(4) The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(b), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. 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.).

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions, and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all exceedances of the rolling, 12-month denatured ethanol and E-85 processing limitation;

ii. all exceedances of the rolling, 12-month VOC and NO_X emissions limitations;

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

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

v. 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

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

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports that describe any changes to this emissions unit which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year

(3) The permittee shall submit annual reports which specify the total CO and VOC emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

VOC emissions from this emission unit shall not exceed 16.79 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon recordkeeping requirements in d)(1) and be determined by using the uncontrolled loading loss (LL) calculations from AP-42 Section 5.2 (1/95). Trucks are a non-dedicated fleet and may transport gasoline from the loading rack from time to time; therefore, the vapor headspace of the trucks is assumed to be saturated with gasoline vapors. The vapor headspace of the railcars is assumed to be saturated with ethanol vapors. Compliance shall be calculated as follows:

Uncontrolled LL (lb-VOC/1000 gallons) = [12.46 * (S * P * M / T)]

where=

S= saturation factor (1.0 for vapor balance, truck; and 0.6 for submerged load w/o vapor balance, rail)

P= true vapor pressure of liquid loaded (4.55 for gasoline, truck; and 0.63 for denatured ethanol, rail)

M= molecular weight of vapors (66 for gasoline, truck; and 49.8 for denatured ethanol, rail)

T= temperature of bulk liquid (avg. of 51.34 ^{o}F + 460 = 511.34 ^{o}R)

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

Uncontrolled LL_{truck}= 7.32 lb VOC/1,000 gallons to truck; and

Uncontrolled LL_{rail}= 0.46 lb VOC/1,000 gallons to rail.

Capture efficiency = 99%

Control efficiency of flare = 98%

Controlled LL_{truck} = [7.32 * 99% * (1 - 98%)] + [7.32 * (1 - 99%)] = 0.218 lb/1,000 gallons to truck; and

Controlled LL_{rail} = [0.46 * 99% * (1 - 98%)] + [0.46 * (1 - 99%)] = 0.014 lb/1,000 gallons to rail.

$LL_{total} = LL_{truck} + LL_{rail}$

where:

LL_{truck} = controlled LL_{truck} * (quantity of denatured ethanol and E-85 loaded into trucks in gal per rolling 12-month period/1,000) * 1.0 ton/2,000 lbs

= 0.218 lb/1,000 gallons * (quantity of denatured ethanol and E-85 loaded into trucks in gal per rolling 12-month period/1,000) * 1.0 ton/2,000 lbs

LL_{rail} = controlled LL_{rail} * (quantity of denatured ethanol and E-85 loaded into railcars in gal per rolling 12-month period/1,000) * 1.0 ton/2,000 lbs

= 0.014 lb VOC/1,000 gallons * (quantity of denatured ethanol and E-85 loaded into railcars in gal per rolling 12-month period/1,000) * 1.0 ton/2,000 lbs

The rolling 12-month limitation reflects the maximum emissions when the entire allowable amount of denatured ethanol and E-85 (i.e., 154,000,000 gallons, for any rolling, 12-month period) processed through this emissions unit is loaded and shipped by truck.

b. Emissions Limitation:

CO emissions from the flare shall not exceed 9.11 lbs/hr

Applicable Compliance Method:

Compliance shall be determined using AP-42 Table 1.4-1 (July 1998) for the pilot flame, manufacturer-provided emissions factor for the flare and inputs representing the Potential To Emit (PTE), as follows:

Emissions = Flare Emissions + Pilot Light Emissions

Flare Emissions = (maximum flare design heat release) * (emission factor)

Flare Emissions = (18.2 mmBtu/hr) * (0.5 lb/mmBtu) = 9.10 lbs/hr

Pilot Emissions = (maximum heat input) * (emission factor)

Pilot Emissions = (0.1 mmBtu/hr) * (0.084 lb/mmBtu) = 0.01 lb/hr

Emissions = 9.10 + 0.01 = 9.11 lbs/hr

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).

c. Emissions Limitation:

CO emissions from the flare shall not exceed 7.16 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon recordkeeping requirements in d)(1) and determined using AP-42 Table 1.4-1 (July 1998) for the pilot flame and the manufacturer-provided emissions factor for the flare, as follows:

Emissions = Flare Emissions from Truck Loading + Flare Emissions from Railcar Loading + Pilot Light Emissions

Truck Loading Emission Factor = 1,389 Btu/cf * 1.0 cf/7.48 gal * 0.5 lb/mmBtu * 1.0 mmBtu/1,000,000 Btu * 10^3 gal/1,000 gal = 0.093 lb/10^3 gallons

Rail Loading Emission Factor = 360 Btu/cf * 1.0 cf/7.48 gal * 0.5 lb/mmBtu * 1.0 mmBtu/1,000,000 Btu * 10^3 gal/1,000 gal = 0.025 lb/10^3 gallons

$Emissions_{Truck}$ = 0.093 lb/10^3 gal * (quantity of denatured ethanol and E-85 loaded into trucks in gal per rolling 12-month period/1,000) * 1.0 ton/2,000 lbs

$Emissions_{Railcar}$ = 0.025 lb/10^3 gal * (quantity of denatured ethanol and E-85 loaded into railcars in gal per rolling 12-month period/1,000) * 1.0 ton/2,000 lbs

Pilot Emissions = (maximum heat input) * (emission factor) * (operating hours) * 1.0 ton/2,000 lbs

Pilot Emissions = (0.1 mmBtu/hr) * (0.084 lb/mmBtu) * (8,760 hrs/yr) * 1.0 ton/2,000 lbs = 0.04 tons/year

The rolling 12-month limitation reflects the maximum emissions when the entire allowable amount of denatured ethanol and E-85 (i.e., 154,000,000 gallons, for any rolling, 12-month period) processed through this emissions unit is loaded and shipped by truck.

d. Emissions Limitation:

NO_x emissions from the flare shall not exceed 5.47 lbs/hr.

Applicable Compliance Method:

Compliance shall be determined using AP-42 Table 1.4-1 (July 1998) for the pilot flame, manufacturer-provided emissions factor for the flare and inputs representing the Potential To Emit (PTE), as follows:

Emissions = Flare Emissions + Pilot Light Emissions

Flare Emissions = (maximum flare design heat release) * (emission factor)

Flare Emissions = (18.2 mmBtu/hr) * (0.3 lb/mmBtu) = 5.46 lbs/hr

Pilot Emissions = (maximum heat input) * (emission factor)

Pilot Emissions = (0.1 mmBtu/hr) * (0.1 lb/mmBtu) = 0.01 lb/hr

Emissions = 5.46 + 0.01 = 5.47 lbs/hr

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).

e. Emissions Limitation:

NO_x emissions from the flare shall not exceed 4.31 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(1) and shall be calculated using AP-42 Table 1.4-1 (July 1998) for the pilot flame and the manufacturer-provided emissions factor for the flare, as follows:

Emissions = Flare Emissions from Truck Loading + Flare Emissions from Railcar Loading + Pilot Light Emissions

Truck Loading Emission Factor = 1,389 Btu/cf * 1.0 cf/7.48 gal * 0.3 lb/mmBtu * 1.0 mmBtu/1,000,000 Btu * 10^3 gal/1,000 gal = 0.056 lb/10^3 gallons

Rail Loading Emission Factor = 360 Btu/cf * 1.0 cf/7.48 gal * 0.3 lb/mmBtu * 1.0 mmBtu/1,000,000 Btu * 10^3 gal/1,000 gal = 0.015 lb/10^3 gallons

$Emissions_{Truck}$ =0.056 lb/10^3 gal * (quantity of denatured ethanol and E-85 loaded into trucks in gal per rolling 12-month period/1,000) * 1.0 ton/2,000 lbs

$Emissions_{Railcar}$ = 0.015 lb/10^3 gal * (quantity of denatured ethanol and E-85 loaded into railcars in gal per rolling 12-month period/1,000) * 1.0 ton/2,000 lbs

Pilot Emissions = (maximum heat input) * (emission factor) * (operating hours) * 1.0 ton/2,000 lbs

Pilot Emissions = (0.1 mmBtu/hr) * (0.1 lb/mmBtu) * (8,760 hrs/yr) * 1.0 ton/2,000 lbs = 0.04 tons/year

The rolling 12-month limitation reflects the maximum emissions when the entire allowable amount of denatured ethanol and E-85 (i.e., 154,000,000 gallons, for any rolling, 12-month period) processed through this emissions unit is loaded and shipped by truck.

g) Miscellaneous Requirements

(1) None.

4. P006, Fermentation Units

Operations, Property and/or Equipment Description:

Seven Fermentation Units and Beer Well controlled with Scrubbers

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b(1)b. and b(1)h.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Particulate emissions (PE) from this emissions unit shall not exceed 0.21 lb/hr and 0.77 tons per year. Emissions of particulate matter less than 10 microns in diameter (PM_{10}) shall not exceed 0.11 lb/hr and 0.41 tons per year. See b)(2)c.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)d.
c.	ORC 3704.03(T)	Volatile organic compound (VOC) emissions from the fermentation scrubber exhaust Stack S40 shall not exceed 44.73 tons, per rolling 12-month period. Volatile organic compound (VOC) emissions from the purge scrubber exhaust Stack S41 shall not exceed 7.67 tons, per rolling 12-month period. Emissions from this emissions unit shall be vented to a scrubber, at all times when the emissions unit is operating, that controls the VOC emissions at a minimum of 98%. See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-31-05(D) (voluntary restrictions to establish potential to emit for HAPs)	HAP emissions from this emissions unit shall not exceed: 5.11 tons of single HAP per rolling 12-month period and; 5.32 tons of combined HAPS per rolling 12-month period.
e.	OAC rule 3745-17-07(A)(1)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 60% opacity.
f.	OAC rule 3745-17-11(B)(1)	The emission limit established in this rule is less stringent than the emission limit established per OAC rule 3745-31-05(A)(3). Pursuant Figure II of this rule, the PE from this emissions unit shall not exceed 2.10 lbs/hr.
g.	OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subpart VV	See the requirements for emissions unit P801 in Section C.7.
h.	ORC 3704.03(F) and OAC rule 3745-114-01	See d)(9), d)(10) and e)(2).

(2) Additional Terms and Conditions

a. This emissions unit has two operating scenarios dependent on the operation of a separate dry ice production facility which uses the exhaust from this emissions unit as a feedstock.

i. When the dry ice facility is in operation, emissions from this emissions unit are vented to the fermentation scrubber, a fraction of which is then diverted to the dry ice facility. The remaining fraction is vented to the atmosphere via Stack S40. If emissions from the fermenter cleaning in place (CIP) and initial fermenter filling degrade the purity of the emissions vented to the dry ice facility, then the CIP and initial fermenter filling emissions are diverted to the purge scrubber and vented to the atmosphere via Stack S41, while the remaining emissions continue to be diverted between fermentation scrubber Stack S40 and the dry ice facility.

ii. When the dry ice facility is not in operation, all emissions from this emissions unit are vented to the atmosphere via the fermentation scrubber and Stack S40, and the purge scrubber and Stack S41 when the purge scrubber is operation.

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

i. implementation of a fugitive leak detection and repair program (LDAR) for all the miscellaneous process equipment associated with this emissions unit; and

ii. venting emissions to a wet scrubber (fermentation scrubber and purge scrubber to control the VOC emissions at a minimum of 98%.

BAT also includes compliance with the terms and conditions of this permit. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE and PM10 emissions from this air contaminant source since the uncontrolled potential to emit for PE and PM10 is less than 10 tons/yr.

Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for HAPs 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 production of undenatured ethanol shall not exceed 146,666,667 gallons per rolling 12-month period. [OAC 3745-31-05(D)]

ii. Emissions from this emissions unit (from fermentation scrubber and purge scrubber combined) shall not exceed:

(a) 5.11 tons of single HAP per rolling 12-month period; and

(b) 5.32 tons of combined HAPs per rolling 12-month period. . [OAC 3745-31-05(D)]

e. The permittee shall include the appropriate process equipment and regulated components in a site fugitive Leak Detection and Repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (includes operational restrictions, monitoring and recordkeeping, reporting, and testing) of OAC rule 3745-21-09(DD) Leaks from process units that produce organic chemicals, and 40 CFR 60 Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry).

f. The rolling 12-month allowable emission rates are based on the annual production of 146,666,667 gallons of undenatured ethanol.

g. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) Emissions from this emissions unit shall be vented to a wet scrubber (fermentation scrubber or purge scrubber) at all times when the emissions unit is operation, and the scrubbers shall control the VOC, PE and PM_{10} emissions at a minimum of 98%.

(2) The amount of undenatured ethanol produced from this emissions unit shall not exceed 146,666,667 gallons, per rolling 12-month period.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable pressure drop across the fermentation scrubber, that shall be maintained in order to demonstrate compliance, shall not be less than 8.7 inches of water.

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable water flow rate to the fermentation scrubber, that shall be maintained in order to demonstrate compliance, shall not be less than 5% less than the average water flow rate to the fermentation scrubber measured during the most recent performance test that demonstrated the emissions unit was in compliance. (The current acceptable water flow rate to the fermentation scrubber is 111 gallons per minute based on emissions testing conducted on 12/08.)

(3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable rate of sodium bisulfite (or equivalent) addition to the fermentation scrubber, that shall be maintained in order to demonstrate compliance, shall not be less than the average rate of sodium bisulfite (or equivalent) addition to the fermentation scrubber measured during the most recent performance test that demonstrated the emissions unit was in compliance. (The current acceptable rate of sodium bisulfite addition to the fermentation scrubber is 270 milliliters per minute of 39% v/v sodium bisulfite solution (±1% v/v) based on emissions testing conducted on 12/08.) If an equivalent to sodium bisulfite or an alternate concentration of sodium bisulfite is

used, the acceptable rate of the equivalent material addition to fermentation scrubber shall contain the same quantity of sulfite ion as the acceptable sodium bisulfite addition rate.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit when this emissions unit is operating in operating scenario b)(2)a.i. (the purge scrubber is venting to the atmosphere), the acceptable range for the pressure drop across the purge scrubber shall be between 0.4 and 17 inches of water (manufacturer's specifications).

(5) In order to maintain compliance with the applicable emission limitation(s) contained in this permit when this emissions unit is operating in operating scenariob)(2)a.i. (the purge scrubber is venting to the atmosphere), the acceptable minimum limit for the water flow rate to the purge scrubber shall be based upon the manufacturer's specifications until performance testing is conducted and the appropriate minimum limit is established to demonstrate compliance.

(6) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the fermentation scrubber and purge Scrubber (in inches of water column), the fermentation scrubber and purge scrubber water flow rates (in gallons per minute), and the rate of sodium bisulfite (or equivalent) addition to the fermentation scrubber (in milliliters per minute) during operation of this emissions unit, as appropriate for the operating scenarios in b)(2)a, including periods of startup and shutdown. The permittee shall record the pressure drops across the scrubbers, the scrubber water flow rates, and the rate of sodium bisulfite (or equivalent) addition to the fermentation scrubber on a once per shift basis, as appropriate for the operating scenarios in b)(2)a. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for any parameter deviates below the minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination

and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date the corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop(s), scrubber water flow rate(s), and rate of sodium bisulfite (or equivalent) addition to the fermentation scrubber readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These minimum limits for the pressure drops, scrubber water flow rates, and rate of sodium bisulfite (or equivalent) addition to the fermentation scrubber are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted minimum limit(s) for the pressure drop(s), scrubber water flow rate(s), or rate of sodium bisulfite (or equivalent) addition to the fermentation scrubber based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the minimum limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(7) 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 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.

(8) The permittee shall maintain monthly records of the following information:

a. the operating hours for the emissions unit;

b. the operating hours for the purge scrubber;

c. the quantity of CO_2 sent to the dry ice production facility, in mmcf;

d. the undenatured ethanol production rate for each month;

e. the rolling, 12-month summation of the undenatured ethanol production;

f. the VOC, PE, PM10, single HAP and combined HAP emissions, in tons, from fermentation scrubber Stack S40; and

g. the VOC, PE, PM10, single HAP and combined HAP emissions, in tons, from purge scrubber Stack S41.

h. the VOC, PE, PM10, single HAP and combined HAP emissions, in tons, for the fermentation scrubber Stacks S40 and purge scrubber Stack S41, combined; and

i. the rolling, 12-month summation of VOC, PE, PM10, single HAP and combined HAP emissions, in tons, for the fermentation scrubber Stacks S40 and purge scrubber Stack S41, combined.

(9) The permit to install (PTI) for this emissions unit 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 PTIO 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 PTIO 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 (mg/m^3): 33.20

Maximum Hourly Emission Rate (lbs/hr): 1.40
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 61.20
MAGLC (µg/m^3): 790

(10) The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(b), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. 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.).

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date) when the pressure drop across the fermentation scrubber, pressure drop across the purge scrubber, fermentation scrubber water flow rate, purge scrubber water flow rate, or the rate of sodium bisulfite (or equivalent) addition to the fermentation scrubber was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;

ii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to either the fermentation scrubber or purge scrubber;

iii. all exceedances of the rolling, 12-month limitation of the undenatured ethanol production; and

iv. all exceedances of the rolling, 12-month VOC, PE, PM_{10}, single HAP and combined HAP emissions limitations.

b. Identification of the following information in accordance with the monitoring requirements for visible emissions in d)(7) above:

i. all days during which any visible particulate emissions were observed from stacks serving this emissions unit; and

ii. any corrective actions taken to minimize or eliminate the visible particulate emissions.

c. the probable cause of each deviation (excursion);

d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

e. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports that describe any changes to this emissions unit which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year.

(3) The permittee shall submit annual reports which specify the total VOC, PE, PM_{10}, single HAP and combined HAPs emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions Limitation:</u>

VOC emissions from the fermentation scrubber exhaust Stack S40 shall not exceed 44.73 tons, per rolling 12-month period.

Applicable Compliance Method:

This 12 month limitation was developed by multiplying the hourly after control potential to emit for this emissions unit (12.26 lb-VOC/hour, as an 8-hour average) by 8760 hours/years and dividing by 2000 lbs/ton. Compliance shall be demonstrated through performance testing as described in described in f)(2) and the monitoring and recordkeeping requirements in d)(8).

b. Emissions Limitation:

VOC emissions from the purge scrubber exhaust Stack S41 shall not exceed 7.67 tons, per rolling 12-month period.

Applicable Compliance Method:

This 12 month limitation was developed by multiplying the hourly potential to emit for the purge exhaust Stack S41 (1.75 lb-VOC/hour, as an 8-hour average) by 8760 hours/years and dividing by 2000 lbs/ton. The hourly potential to emit for Stack S41 shall be determined using the hourly potential to emit for this emissions (12.26 lb-VOC/hr) unit and dividing by seven. Compliance shall be demonstrated through performance testing as described in described in f)(3) and the monitoring and recordkeeping requirements in d)(8).

c. Emissions Limitation:

PE shall not exceed 0.21 lb/hr

PE shall not exceed 2.10 lbs/hr [OAC rule 3745-17-11(B)(1)].

Applicable Compliance Method:

If required, compliance shall be demonstrated through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

d. Emissions Limitation:

PE shall not exceed 0.77 ton per rolling 12 month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(8) and shall be determined by using the following equation:

PE = [(10.51 lb PE/mmgal undenatured ethanol) * (rolling 12 month undenatured ethanol production, mmgal)] / 2,000 pounds/ton

e. Emissions Limitation:

PM_{10} emissions shall not exceed 0.41 ton per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(8) and shall be determined by using the following equation:

PM_{10} Emissions = [(5.55 lb PM_{10}/mmgal undenatured ethanol) * (rolling 12 month undenatured ethanol production, mmgal)] / 2,000 pounds/ton

f. Emission Limitation:

Single HAP emissions shall not exceed 5.11 tons per rolling 12-month period.

Combined HAP emissions shall not exceed 5.32 tons per rolling 12-month period.

Applicable Compliance Method

Compliance shall be based upon the record keeping requirements in d)(8) and shall be determined by using the following equation:

For each individual HAP,

Individual HAP emissions = fermentation scrubber Stack S40 individual HAP emissions + purge scrubber Stack S41 individual HAP emissions

fermentation scrubber Stack S40 individual HAP emissions = (hourly emissions rate from Stack S40) * (annual operating hours of the emissions unit) * [1 - (annual quantity of CO_2 sent to the dry ice production facility, mmcf) / {(tested volumetric flue gas (i.e., CO_2) flow rate, mmcf/hr) * (annual operating hours of the emissions unit)}] / 2,000 pounds/ton

purge scrubber Stack S41 individual HAP emissions = (hourly emissions rate from Stack S41) * (annual operating hours for the purge scrubber)] / 2,000 pounds/ton

The hourly emissions rate of each individual HAP from Stacks S40 and S41 shall be determined through performance testing as described in f)(2) and f)(3) below.

To determine the annual emissions rate for combined HAPs, sum the annual emissions calculated above for each individual HAP.

(2) The permittee shall conduct, or have conducted, emissions testing of the fermentation scrubber (that exhausts to Stack S40) for this emissions unit in accordance with the following requirements:

a. The emissions testing shall be conducted between May 1, 2014 and September 30, 2014. Future testing will be required as needed and determined by Ohio EPA District Office or local air agency, and will be addressed in the Title V permit to be issued.

b. The emissions testing shall be conducted to:

   i. demonstrate the potential to emit for VOC of 12.26 lbs/hr fermentation scrubber Stack S40, as one 8-hour average;

   ii. demonstrate compliance with the allowable combined emission rate (i.e., emissions from fermentation scrubber Stack S40 plus emissions from purge scrubber Stack S41) for single and combined HAPs;

   iii. demonstrate compliance with the VOC control efficiency (98%) requirement for of the fermentation scrubber;

   iv. establish the acceptable minimum limit for the water flow rate to the fermentation scrubber in d)(2) above; and

   v. establish the acceptable minimum limit for the rate of sodium bisulfite (or equivalent) addition to the scrubber as identified in d)(3) above.

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

   i. Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;

   ii. Methods 18 or 320 from 40 CFR Part 60, Appendix A for total VOC and total HAPs (including, but not limited to, acetaldehyde, acetic acid, ethanol, formaldehyde, formic acid, 2-furaldehyde, methanol and acrolein*);

   iii. Method 25 or Method 25A from 40 CFR Part 60, Appendix A for VOC control efficiency.

   * With prior approval from the Regional Air Pollution Control Agency, the permittee may perform pre-screening to determine which VOC and HAPs should be tested.

   Alternative U.S. EPA approved test methods may be used with prior approval from the Regional Air Pollution Control 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 appropriate Ohio EPA District Office or local air agency.

e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

(3) The permittee shall conduct, or have conducted, emission testing of the purge scrubber (that exhausts to Stack S41) for this emissions unit in accordance with the following requirements:

a. For purge scrubber, the emissions testing shall be conducted within 180 days of initial startup of the purge scrubber.

b. The emission testing shall be conducted to:

i. demonstrate the potential to emit for VOC of 1.75 lbs/hr, as one 8-hour average from purge scrubber Stack S41;

ii. demonstrate compliance with the allowable combined emission rate (i.e., emissions from fermentation scrubber Stack S40 plus emissions from purge scrubber Stack S41) for single and combined HAPs;

iii. demonstrate compliance with the VOC control efficiency (98% for VOC) requirement for the purge scrubber; and

iv. establish the acceptable minimum limits for water flow rate to the purge scrubber as identified in d)(5) above.

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

i. Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;

ii. Methods 18 or 320 from 40 CFR Part 60, Appendix A for total VOC and total HAPs (including, but not limited to, acetaldehyde, acetic acid, ethanol, formaldehyde, formic acid, 2-furaldehyde, methanol and acrolein*); and

iii. Method 25 or Method 25A from 40 CFR Part 60, Appendix A for VOC control efficiency.

* With prior approval from the Regional Air Pollution Control Agency, the permittee may perform pre-screening to determine which VOC and HAPs should be tested.

Alternative U.S. EPA approved test methods may be used with prior approval from the Regional Air Pollution Control 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 appropriate Ohio EPA District Office or local air agency.

e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

5. P012, Cooling Towers

Operations, Property and/or Equipment Description:

Cooling Towers

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)c.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Particulate emissions (PE) shall not exceed 13.70 tons, per rolling 12-month period. Visible PE from the stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average, except as provided by rule. See b)(2)a. and c)(1).
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Emissions of particulate matter less than 10 microns in diameter (PM_{10}) shall not exceed 0.57 lb/hr and 2.50 tons per year. See b)(2)b.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)c. and c)(1).
d.	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to ORC 3704.03(T).
e.	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the hourly emissions rate that corresponds to the emissions limitation established pursuant to ORC 3704.03(T). Pursuant Table I of this rule, the PE from this emissions unit shall not exceed 15.26 lbs/hr.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) control requirements for this emissions unit has been determined to be use of high efficiency drift eliminators. BAT also includes compliance with the terms and conditions of this permit. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) does not apply to PM_{10} emissions from this air contaminant source since the potential to emit for PM_{10} is less than 10 tons/year.

d. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) The total dissolved solids content of the circulating cooling tower water shall not exceed 2,500 ppm.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

a. monitor and record the total dissolved solids content of the circulating cooling, in ppm, on a monthly basis; and

b. the rolling, 12-month summation of PE emissions, in tons.

(2) The permittee shall perform daily checks, when this 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.

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all exceedances of the total dissolved solids content limitation; and

ii. all exceedances of the rolling, 12-month summation of PE emissions.

b. identification of the following information in accordance with the monitoring requirements for visible emissions in d)(2) above:

i. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

ii. any corrective actions taken to minimize or eliminate the visible particulate emissions.

c. the probable cause of each deviation (excursion);

d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

e. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports which specify the PE and PM_{10} emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PE shall not exceed 13.70 tons, per rolling 12-month period.

Applicable Compliance Method:

The rolling 12-month limitation was determined multiplying the maximum circulating water flow (3,000,000 gal/hr) by the density of water (8.34 lb/gal), the percent drift (0.005%), the maximum total dissolved solids concentration (2,500 lb solids/1,000,000 lbs water), then multiplying by 8,760 hours per year and dividing by 2,000 pounds per ton. Compliance with the 12-month rolling limitation shall be determined by recordkeeping requirements in d)(1) using the recorded monthly total dissolved solids concentration.

If required, the permittee shall submit a testing proposal which will demonstrate that the maximum drift loss does not exceed 0.005 percent. Also, if required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 5, or an alternative U.S. EPA approved method.

b. Emission Limitation:

PM_{10} emissions shall not exceed 0.57 lb/hr and 2.50 tons per year.

Applicable Compliance Method:

Compliance with the hourly PM_{10} emissions limitation shall be determined by multiplying the maximum circulating water flow (3,000,000 gal/hr) by the density of water (8.34 lb/gal), the percent drift (0.005%), the maximum total dissolved solids concentration (2,500 lb solids/1,000,000 lbs water), and the mass fraction of the percent drift that is PM_{10} (0.181).

Compliance with the annual PM10 emissions limitation is determined by multiplying the hourly emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton.

Compliance with these limitations is presumed based on complying with the total dissolved solids concentration limitation of 2,500 lb solids/1,000,000 lbs water.

If required, the permittee shall submit a testing proposal which will demonstrate that the maximum drift loss does not exceed 0.005 percent. Also, if required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 202, or an alternative U.S. EPA approved method.

c. Emission Limitation:

Visible PE shall not exceed 10% opacity, as a six minute average.

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).

g) Miscellaneous Requirements

(1) None.

6. P013, Methanators

Operations, Property and/or Equipment Description:

Methanators vented to DDGS Dryer Numbers #1 and #3 (P008 and P010) and/or to Stack S60 Flare

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Emissions from Stack S60 flare serving this emissions unit shall not exceed: 0.45 lb/hr and 1.97 tons per year of nitrogen oxides (NO_x), and 0.33 lb/hr and 1.45 tons per year of volatile organic compounds (VOC). See b)(2)c. and b)(2)e.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)f.
c.	ORC 3704.03(T)	Emissions from Stack S60 flare serving this emissions unit shall not exceed: 0.45 lb/mmBtu of carbon monoxide (CO). See b)(2)c. and b)(2)e.
d.	OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subpart VV	See the requirements for emissions unit P801. See b)(2)d.
e.	OAC rule 3745-31-05(D) (synthetic minor to avoid PSD for NO_x)	Emissions from Stack S60 flare serving this emissions unit shall not exceed 1.97 tons of NO_X per rolling 12-month period. See B.2. and B.3 in Section B. Facility-Wide Terms and Conditions.

(2) Additional Terms and Conditions

a. Emissions from this emissions unit are typically vented to both DDGS Dryer #1 (P008) and/or DDGS Dryer #3 (P010) and/or Stack S60 flare. If the dryers are not operating, all of the emissions from this emissions unit are vented to the Stack S60 flare. The worst-case hourly emissions scenario is when this emissions unit vents to the Stack S60 flare, and the emissions limitations are based on venting emissions to and operating the flare 8,760 hours/year.

b. Emissions from P005, P007, P008, P009, P010, P011, P013 (except emissions vented to the Stack S60 flare) and P902 (except emissions vented to Stack S70) are vented through and controlled by thermal oxidizer/waste heat recovery boilers emissions units B001 and B002, which in turn vent to a common stack identified as Stack S10. The emissions limitations and other requirements for the Stack S10 are accounted for and included in the permit terms and conditions for emissions units B001 and B002, P005 and P007, and P008 through P011. The monitoring, recordkeeping, reporting, and testing requirements for the thermal oxidizer are established in permit terms and conditions for emissions units B001 and B002, and are sufficient to demonstrate compliance when emissions from these units are vented to emissions units P008 or P010.

c. The hourly VOC, the hourly and annual NO_x, and the lb/mmBtu CO emissions limitations were established to reflect the potential to emit for this emissions unit as vented to a thermal oxidizer or to a flare. The monitoring, recordkeeping, reporting, and testing requirements for the thermal oxidizer and flare as established in the following terms and conditions are sufficient to demonstrate compliance with this limitation.

d. The permittee shall implement a fugitive leak detection and repair program (LDAR) for all the miscellaneous process equipment associated with this emissions unit as specified in the requirements for emissions unit P801. The program shall include the appropriate process equipment and regulated components in a site fugitive Leak Detection and Repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (includes operational restrictions, monitoring and recordkeeping, reporting, and testing) of OAC rule 3745-21-09(DD) Leaks from process units that produce organic chemicals, and 40 CFR 60 Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry).

e. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S.

EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA

approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

f. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x and VOC emissions from this air contaminant source since the potential to emit for NO_x and VOC is less than 10 tons/yr.

g. The permittee shall maintain the following when operating this emissions unit:

i. maintain enclosures and vent all the emissions from this emissions unit to the thermal oxidizers or Stack S60 flare to ensure compliance;

ii. operate the thermal oxidizers to control VOC at 98%, or, when this emissions unit is not vented to the thermal oxidizers, it will be vented to the Stack S60 flare to control VOC;

iii. The Stack S60 flare shall meet the following requirements:

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

(b) the flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

c) Operational Restrictions

(1) All of the emissions from this emissions unit shall be vented to a thermal oxidizer or to a flare.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than biomethanator off-gases and/or natural gas in the Stack S60 flare serving this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned.

(2) The permittee shall monitor the Stack S60 flare to ensure that it is operated and maintained in conformance with its design specifications.

(3) The permittee shall maintain monthly records of the following information:

a. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to a thermal oxidizer or to the Stack S60 flare;

b. the total number of hours when the emissions unit was in operation and the process emissions were vented to the Stack S60 flare;

c. the total number of hours, per rolling, 12-month period when the emissions unit was in operation and the process emissions were vented to the Stack S60 flare; and

d. the rolling 12-month summation of NO_x emissions from the Stack S60 flare, in tons, calculated in accordance with f)(1).

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to a thermal oxidizer or Stack S60 flare; and

ii. any exceedances of the rolling, 12-month summation of NO_x emissions from Stack S60 flare.

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit deviation (excursion) reports to the Regional Air Pollution Control Agency that identify each day when a fuel other than biomethanator off-gases 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 which specify the total NO_X, VOC and CO emissions from the Stack S60 flare for this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by

including and identifying the specific emission data from this emissions unit in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

Emissions from Stack S60 flare serving this emissions unit shall not exceed 0.45 lb/hr and 1.97 tons per year of NO_x.

Applicable Compliance Method:

Compliance with the hourly NO_x emissions limitation shall be based upon using emissions factors from Table 13.5-1 (9/91) for methanator gas flaring and Table 1.4-1 (7/98) for the pilot burner emissions of AP-42, Compilation of Air Pollution Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, and inputs representing the Potential to Emit (PTE), as follows:

Emissions = Flare Emissions + Pilot Burner Emissions

Flare Emissions = (maximum flare heat input) * (flare emissions factor)

Flare Emissions = (6.4 mmBtu/hr) * (0.068 lb/mmBtu)

Flare Emissions = 0.44 lbs/hr

Pilot Burner Emissions = (maximum pilot burner heat input) * (pilot burner emissions factor)

Pilot Burner Emissions = (0.1 mmBtu/hr) * (100 lb/mmscf) / (1000 Btu/scf)

Pilot Burner Emissions = 0.01 lb/hr

Emissions = 0.44 lbs/hr + 0.01 lb/hr = 0.45 lbs/hr

Compliance with the annual NO_x emission limitation is determined by multiplying the hourly emissions limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Record keeping of the hourly and annual emissions is not required since the emissions unit is permitted at its potential to emit.

b. Emission Limitation:

Emissions from Stack S60 flare serving this emissions unit shall not exceed 0.33 lb/hr and 1.45 tons per year of VOC.

Applicable Compliance Method:

Compliance with the hourly VOC emission limitation shall be based upon using emissions factors from Table 13.5-1 (9/91) for methanator gas flaring and Table 1.4-1 (7/98) for the pilot burner emissions of AP-42, Compilation of Air Pollution Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, and inputs representing the Potential to Emit (PTE), as follows:

Emissions = Flare Emissions + Pilot Burner Emissions

Flare Emissions = (maximum flare heat input) * (flare emissions factor)

Flare Emissions = (6.4 mmBtu/hr) * (0.052 lb/mmBtu)

Flare Emissions = 0.33 lbs/hr

Pilot Burner Emissions = (maximum pilot burner heat input) * (pilot burner emissions factor)

Pilot Burner Emissions = (0.1 mmBtu/hr) * (5.5 lb/mmscf) / (1000 Btu/scf)

Pilot Burner Emissions = 0.001 lb/hr

Emissions = 0.33 lbs/hr + 0.001 lb/hr = 0.33 lbs/hr

Compliance with the annual VOC emissions limitation is determined by multiplying the hourly emission limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Record keeping of the hourly and annual emissions is not required since the emissions unit is permitted at its potential to emit.

c. Emissions Limitation:

Emissions from Stack S60 flare serving this emissions unit shall not exceed 0.45 lb//mmBtu of CO.

Applicable Compliance Method:

Compliance lb/mmBtu emissions limitation shall be based upon using emissions factors from Table 13.5-1 (9/91) for methanator gas flaring and Table 1.4-1 (7/98) for the pilot burner emissions of AP-42, Compilation of Air Pollution Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, and inputs representing the Potential to Emit (PTE), as follows:

Emissions = Flare Emissions + Pilot Burner Emissions

Flare Emissions = (0.37 lb/mmBtu) + (0.08 mmBtu/hr)

Flare Emissions = 0.45 lb/mmBtu

Record keeping of the process emissions is not required since the emissions unit is permitted at its potential to emit. Compliance with this limitation is assumed by operating the flare in accordance and compliance with the requirement of d)(2).

d. Emissions Limitation:

There shall be no visible emissions from the Stack S60 flare except for periods not to exceed a total of five minutes during any one hundred twenty consecutive minutes.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

e. Emissions Limitation:

Emissions from Stack S60 flare serving these emissions units shall not exceed 1.97 tons of NO_X per rolling 12-month period.

Applicable Compliance Method:

The rolling 12-month NO_x emissions limitation was determined by multiplying the hourly NO_x emissions rate by the total number of hours, per rolling, 12-month period when the emissions unit was in operation and the process emissions were vented to the flare and dividing by 2,000 pounds per ton .

Compliance shall be based upon the record keeping requirements in d)(3).

g) Miscellaneous Requirements

(1) None.

7. P801, Equipment Leaks

Operations, Property and/or Equipment Description:

Fugitive VOC Emissions (Leaks)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Volatile Organic Compound (VOC) emissions shall not exceed 8.85 tons per rolling 12-month period. The requirement of this rule includes compliance with requirements of OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subpart VV. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(ii), as effective 12/01/06	VOC emissions shall not exceed 8.85 tons per rolling 12-month period. See b)(2)b.
c.	OAC rule 3745-21-09(DD)	See b)(2)c, b)(2)d, c)(1), d)(1), e)(1) and e)(1).
d.	40 CFR Part 60, Subpart VV	See g)(1).

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality

Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply the VOC emissions from this air contaminant source since the calculated annual emissions rate for VOC is less than 10 tons/yr taking into account the federally enforceable rules and limitations established under 40 CFR Part 60, Subpart VV.

c. The permittee of the process unit, producing one or more of the organic chemicals identified in Appendix A to OAC 3745-21-09 as an intermediate or final product, shall comply with the requirements identified in OAC 3745-21-09 paragraphs (DD)(2) to (DD)(6).

d. 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 recordkeeping, 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.

c) Operational Restrictions

(1) See g)(1) for the requirements of 40 CFR Part 60, Subpart VV.

d) Monitoring and/or Recordkeeping Requirements

(1) See g)(1) for the requirements of 40 CFR Part 60, Subpart VV.

(2) The permittee shall maintain monthly records of the rolling, 12-month summation of VOC emissions from this emissions unit, in tons.

e) Reporting Requirements

(1) See g)(1) for the requirements of 40 CFR Part 60, Subpart VV.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all exceedances of the rolling, 12-month VOC emissions limitations;

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(3) The permittee shall submit annual reports which specify the total VOC emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions Limitation</u>

The VOC emissions shall not exceed 8.85 tons per rolling 12-month period.

<u>Applicable Compliance Method</u>

Compliance shall be based upon the record keeping requirements in d)(2) and shall be calculated using the following component counts for the facility as shown below and emissions factors from "Protocol for Equipment Leak Emission Estimates", EPA-453/R-95-017, November 1995. 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 volatile organic compounds.

equipment component	Maximum number of components	Leak emissions factor (lb/hr/source)	LDAR control efficiencies (%)	Controlled VOC emissions	
				lb/hr	tons/yr
light liquid valves	545	0.0089	84	0.77	3.40
light liquid pumps	45	0.0439	69	0.61	2.68

gas valves	91	0.0132	87	0.16	0.68
flanges (connectors)	910	0.0040	87	0.48	2.09
sampling connectors	0	0.0331	0	0	0
Sampling connectors (manholes)	0	0.0331	0	0	0
open ended pugs	0	0.0375	0	0	0
Total VOC Emissions					8.85

a. See g)(1) for the requirements of 40 CFR Part 60, Subpart VV.

g) Miscellaneous Requirements

(1) 40 CFR Part 60, Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

§ 60.480 Applicability and designation of affected facility.

(a) (1) The provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry.

(2) The group of all equipment (defined in §60.481) within a process unit is an affected facility.

(b) Any affected facility under paragraph (a) of this section that commences construction or modification after January 5, 1981, shall be subject to the requirements of this subpart.

(c) Addition or replacement of equipment for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(d) (1) If an owner or operator applies for one or more of the exemptions in this paragraph, then the owner or operator shall maintain records as required in §60.486(i).

(2) Any affected facility that has the design capacity to produce less than 1,000 Mg/yr (1,102 ton/yr) is exempt from §60.482.

(3) If an affected facility produces heavy liquid chemicals only from heavy liquid feed or raw materials, then it is exempt from §60.482.

(4) Any affected facility that produces beverage alcohol is exempt from §60.482.

(5) Any affected facility that has no equipment in VOC service is exempt from §60.482.

(e) *Alternative means of compliance —*

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

(2) Part 60, subpart A. Owners or operators who choose to comply with 40 CFR part 65, subpart F must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 65, subpart F, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart F, must comply with 40 CFR part 65, subpart A.

§ 60.481 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act or in subpart A of part 60, and the following terms shall have the specific meanings given them.

Capital expenditure means, in addition to the definition in 40 CFR 60.2, an expenditure for a physical or operational change to an existing facility that:

(a) Exceeds P, the product of the facility's replacement cost, R, and an adjusted annual asset guideline repair allowance, A, as reflected by the following equation: $P = R \times A$, where

(1) The adjusted annual asset guideline repair allowance, A, is the product of the percent of the replacement cost, Y, and the applicable basic annual asset guideline repair allowance, B, divided by 100 as reflected by the following equation:

$A = Y \times (B \div 100)$;

(2) The percent Y is determined from the following equation: $Y = 1.0 -- 0.575 \log X$, where X is 1982 minus the year of construction; and

(3) The applicable basic annual asset guideline repair allowance, B, is selected from the following table consistent with the applicable subpart:

Table for Determining Applicable for B

Subpart applicable to facility	Value of B to be used in equation
VV	12.5
DDD	12.5
GGG	7.0
KKK	4.5

Closed vent system means a system that is not open to the atmosphere and that is composed of hard-piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back to a process.

Connector means flanged, screwed, welded, or other joined fittings used to connect two pipe lines or a pipe line and a piece of process equipment.

Control device means an enclosed combustion device, vapor recovery system, or flare.

Distance piece means an open or enclosed casing through which the piston rod travels, separating the compressor cylinder from the crankcase.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Duct work means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

Equipment means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by this subpart.

First attempt at repair means to take rapid action for the purpose of stopping or reducing leakage of organic material to atmosphere using best practices.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in-process combustion equipment, such as furnaces and gas turbines, either singly or in combination.

Hard-piping means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards such as ASME B31.3, Process Piping (available

from the American Society of Mechanical Engineers, PO Box 2900, Fairfield, NJ 07007–2900).

In gas/vapor service means that the piece of equipment contains process fluid that is in the gaseous state at operating conditions.

In heavy liquid service means that the piece of equipment is not in gas/vapor service or in light liquid service.

In light liquid service means that the piece of equipment contains a liquid that meets the conditions specified in §60.485(e).

In-situ sampling systems means nonextractive samplers or in-line samplers.

In vacuum service means that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa)(0.7 psia) below ambient pressure.

In VOC service means that the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight. (The provisions of §60.485(d) specify how to determine that a piece of equipment is not in VOC service.)

Liquids dripping means any visible leakage from the seal including spraying, misting, clouding, and ice formation.

Open-ended valve or line means any valve, except safety relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

Pressure release means the emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.

Process improvement means routine changes made for safety and occupational health requirements, for energy savings, for better utility, for ease of maintenance and operation, for correction of design deficiencies, for bottleneck removal, for changing product requirements, or for environmental control.

Process unit means components assembled to produce, as intermediate or final products, one or more of the chemicals listed in §60.489 of this part. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

Process unit shutdown means a work practice or operational procedure that stops production from a process unit or part of a process unit. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not a process unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not process unit shutdowns.

Quarter means a 3-month period; the first quarter concludes on the last day of the last full month during the 180 days following initial startup.

Repaired means that equipment is adjusted, or otherwise altered, in order to eliminate a leak as indicated by one of the following: an instrument reading of 10,000 ppm or greater, indication of liquids dripping, or indication by a sensor that a seal or barrier fluid system has failed.

Replacement cost means the capital needed to purchase all the depreciable components in a facility.

Sampling connection system means an assembly of equipment within a process unit used during periods of representative operation to take samples of the process fluid. Equipment used to take nonroutine grab samples is not considered a sampling connection system.

Sensor means a device that measures a physical quantity or the change in a physical quantity such as temperature, pressure, flow rate, pH, or liquid level.

Synthetic organic chemicals manufacturing industry means the industry that produces, as intermediates or final products, one or more of the chemicals listed in §60.489.

Volatile organic compounds or VOC means, for the purposes of this subpart, any reactive organic compounds as defined in §60.2 Definitions.

§ 60.482-1 Standards: General.

(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.

(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.

(c) (1) 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.

(2) 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.

(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).

§ 60.482-2 Standards: Pumps in light liquid service.

(a) (1) 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.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b) (1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c) (1) 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.

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

(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:

(1) 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.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

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

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

(5) (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.

(6) (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.

(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:

(1) Has no externally actuated shaft penetrating the pump housing,

(2) 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

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

(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.

(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:

(1) 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

(2) 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.

(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.

§ 60.482-3 Standards: Compressors.

(a) 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.

(b) Each compressor seal system as required in paragraph (a) shall be:

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

(2) 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

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

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(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.

(e) (1) Each sensor as required in paragraph (d) shall be checked daily or shall be equipped with an audible alarm.

(2) 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.

(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.

(g) (1) 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.

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

(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.

(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:

(1) 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

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

(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.

§ 60.482-4 Standards: Pressure relief devices in gas/vapor service.

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

(b) (1) 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.

(2) 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).

(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.

(d) (1) 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.

(2) 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.

§ 60.482-5 Standards: Sampling connection systems.

(a) 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.

(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:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) 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

(4) 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.

(c) In situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

§ 60.482-6 Standards: Open-ended valves or lines.

(a) (1) 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).

(2) 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.

(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.

(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.

(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.

(e) Open-ended valves or lines containing materials which would auto catalytically polymerize or would present an explosion, serious overpressure, 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.

§ 60.482-7 Standards: Valves in gas/vapor service and in light liquid service.

(a) Each valve shall be monitored monthly to detect leaks by the methods specified in §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).

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

(c) (1) 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.

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

(d) (1) 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.

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

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(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:

(1) Has no external actuating mechanism in contact with the process fluid,

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

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

(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:

(1) 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

(2) 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.

(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:

(1) 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.

(2) 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

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

§ 60.482-8 Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors.

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

(1) 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.

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

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

(c) (1) 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.

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

(d) First attempts at repair include, but are not limited to, the best practices described under §60.482–7(e).

§ 60.482-9 Standards: Delay of repair.

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

(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.

(c) Delay of repair for valves will be allowed if:

(1) 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

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482–10.

(d) Delay of repair for pumps will be allowed if:

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

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

(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.

§ 60.482-10 Standards: Closed vent systems and control devices.

(a) 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.

(b) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an

efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent.

(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.

(d) Flares used to comply with this subpart shall comply with the requirements of §60.18.

(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.

(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.

(1) 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.

(2) 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).

(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.

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

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

(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.

(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.

(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:

(1) 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

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

(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:

(1) 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

(2) 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

(3) 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.

(l) The owner or operator shall record the information specified in paragraphs (l)(1) through (l)(5) of this section.

(1) 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.

(2) 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.

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

(4) 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.

(5) 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.

(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.

§ 60.483-1 Alternative standards for valves—allowable percentage of valves leaking.

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

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

(1) 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).

(2) 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.

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

(c) Performance tests shall be conducted in the following manner:

(1) 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).

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

(3) 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.

(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.

§ 60.483-2 Alternative standards for valves—skip period leak detection and repair.

(a) (1) 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.

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

(b) (1) 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.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

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

§ 60.484 Equivalence of means of emission limitation.

(a) Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.

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

(1) 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.

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

(3) 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.

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

(1) 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.

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

(3) 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.

(4) 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.

(5) 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).

(6) 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.

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

(e) (1) 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.

(2) 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.

(3) 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.

(f) (1) 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.

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

§ 60.485 Test methods and procedures.

(a) 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).

(b) The owner or operator shall determine compliance with the standards in §§60.482, 60.483, and 60.484 as follows:

(1) 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.

(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:

(1) The requirements of paragraph (b) shall apply.

(2) 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.

(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:

(1) 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.

(2) 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.

(3) 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.

(e) The owner or operator shall demonstrate that all equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20˚C (1.2 in. H_2O 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.

(2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20˚C (1.2 in. H_2O at 68˚F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(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.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$$V_{max} = K_1 + K_2 H_T$$

Where:

V_{max} = Maximum emitted velocity, m/sec (ft/sec)

H_T = Net heating value of the gas being combusted, MJ/scm (Btu/scf).

K_1 = 8.706 m/sec (metric units)

= 28.56 ft/sec (English units)

K_2 = 0.7084 m 4 /(MJ-sec) (metric units)

= 0.087 ft 4 /(Btu-sec) (English units)

(4) The net heating value (HT) of the gas being combusted in a flare shall be computed using the following equation:

$$H_r = K \sum_{i=1}^{n} C_i \; H_i$$

Where:

K = Conversion constant, 1.740 × 10^7 (g-mole)(MJ)/ (ppm-scm-kcal) (metric units)

= 4.674 × 10^8 [(g-mole)(Btu)/(ppm-scf-kcal)] (English units)

C_i = Concentration of sample component "i," ppm

H_i = net heat of combustion of sample component "i" at 25°C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole

(5) 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."

(6) 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.

(7) 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.

§ 60.486 Recordkeeping requirements.

(a) (1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) 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.

(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:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) 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.

(3) The identification on equipment except on a valve, may be removed after it has been repaired.

(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:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) “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.

(5) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(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:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) 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.

(4) 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.

(5) 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.

(e) The following information pertaining to all equipment subject to the requirements in §§60.482–1 to 60.482–10 shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of this subpart.

(2) (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.

(3) A list of equipment identification numbers for pressure relief devices required to comply with §60.482–4.

(4) (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.

(5) A list of identification numbers for equipment in vacuum service.

(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:

(1) 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.

(2) 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.

(g) The following information shall be recorded for valves complying with §60.483–2:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(h) The following information shall be recorded in a log that is kept in a readily accessible location:

(1) Design criterion required in §§60.482–2(d)(5) and 60.482–3(e)(2) and explanation of the design criterion; and

(2) Any changes to this criterion and the reasons for the changes.

(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):

(1) An analysis demonstrating the design capacity of the affected facility,

(2) 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

(3) An analysis demonstrating that equipment is not in VOC service.

(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.

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

§ 60.487 Reporting requirements.

(a) 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.

(b) The initial semiannual report to the Administrator shall include the following information:

(1) Process unit identification.

(2) 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).

(3) 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).

(4) 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).

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in §60.486:

(1) Process unit identification.

(2) 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.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported according to paragraph (b) if changes have occurred since the initial report or subsequent revisions to the initial report.

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

(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.

(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.

§ 60.488 Reconstruction.

For the purposes of this subpart:

(a) 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.

(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.

8. P901, Grain Receiving (Truck and Rail), Handling and Storage

Operations, Property and/or Equipment Description:

Grain Receiving (Truck) and Grain Handling Prior to Corn Storage controlled by a baghouse (Stack S-20); Grain Receiving (Rail) controlled by a baghouse (Stack S-20A); Grain Material Handling associated with the Grain Dryer controlled by a baghouse (Stack S-22); Scalper, Grinding/Day Bin and Roof Elevator Leg controlled by a baghouse (Stack S-26); Ground Corn Handling controlled by a baghouse (Stack S-26A); and Two Concrete Corn Storage Bins (Bin #1 and Bin #2) controlled by two bin vent filters (BV-1 and BV-2)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Each baghouse and bin vent filter for this emissions unit shall achieve an outlet emission rate of not greater than 0.005 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases (gr/dscf). Visible PE of fugitive dust from grain handling operations shall not exceed 0% opacity. Visible PE of fugitive dust from truck and railcar unloading shall not exceed 5% opacity.
b.	OAC rule 3745-17-07(A)(1)	Visible PE from the baghouse and bin vent filter stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the emission limitation established pursuant to ORC 3704.03(T).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR 60 Subpart DD - Standards of Performance for Grain Elevators	The fugitive visible PE limitation specified by this rule is equivalent to the emissions limitations established pursuant to ORC 3704.03(T).
e.	OAC rule 3745-17-07(B)	This emissions unit is exempt from the fugitive visible PE limitations as specified in this rule pursuant to OAC rule 3745-17-07(B)(11)(e).
f.	OAC rule 3745-17-08(B)	The facility 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 this rule.
g.	OAC rule 3745-31-05(D) (voluntary restrictions to avoid PSD for PE and PM10 and to establish potential to emit)	PE and PM_{10} emissions from the stacks serving this emissions unit shall not exceed 12.71 tons per rolling 12-month period. Fugitive PE shall not exceed 1.40 tons per rolling 12-month period. Fugitive PM_{10} shall not exceed 0.31 tons per rolling 12-month period. See b)(2)a.

(2) Additional Terms and Conditions

a. Permit to Install P0110097 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 establishing the potential to emit under OAC rule 3745-31-05(D).

i. The maximum amount of grain received shall not exceed 1,596,000 tons per rolling 12-month period (corresponding to a rolling 12-month production of 154,000,000 gallons of denatured alcohol).

ii. When operating, each operation associated with this emission unit shall be vented to and controlled by a dust collector (baghouse or bin vent filter) that achieves a minimum PE and PM_{10} control efficiency of 95%.

iii. The maximum air flow rate for all of the dust collectors (baghouses and bin vent filters) associated with this emissions unit shall not exceed a total of 67,700 acfm.

b. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) The maximum amount of grain received shall not exceed 1,596,000 tons per rolling 12-month period (corresponding to a rolling 12-month production of 154,000,000 gallons of denatured alcohol).

(2) When operating, each operation associated with this emission unit shall be vented to and controlled by a dust collector (baghouse or bin vent filter) that achieves a minimum PE and PM_{10} control efficiency of 95%.

(3) The maximum air flow rate for all of the dust collectors (baghouses and bin vent filters) associated with this emissions unit shall not exceed a total of 67,700 acfm.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across each baghouse and bin vent filter when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across each baghouse and bin vent filter on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The acceptable pressure drop range shall be based upon the manufacturer's specifications, which is 0.25 to 8 inches of water for each of the seven (7) baghouses/bin vent filters serving this emissions unit.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across each baghouse and bin vent filter is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(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 stacks serving this emissions unit. 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 emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under d)(2)d above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions 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.

(3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive emissions from the truck and railcar unloading. 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.

(4) The permittee shall perform daily checks, when the emissions unit is in operation, for any visible fugitive particulate emissions from the grain handling operations. 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. the total duration of any visible emission incident; and

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

(5) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the operating hours for each month;

b. the PE and PM_{10} emissions exhausted from the stacks serving this emissions unit, in tons;

c. the rolling, 12-months summation of PE and PM_{10} emissions exhausted from the stacks serving this emissions unit, in tons;

d. the amount of grain received, in tons;

e. the rolling 12-months summation of the amount of gain received, in tons

f. the fugitive PE and PM_{10} emissions from grain receiving, in tons; and

g. the rolling 12-months summation of the fugitive PE and PM_{10} emissions from grain receiving, in tons.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify any deviation or exceedance of a federally enforceable requirement contained in this permit to include:

a. each period of time (start time and date, and end time and date) when the pressure drop across any of the baghouses/bin vent filters were outside of the acceptable range;

b. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all exceedances of the rolling 12-months summation limitation on the amount of gain received, in tons

ii. all exceedances of the rolling, 12-month summation of the PE and PM_{10} emissions limitations.

c. an identification of each incident of deviation described in e)(1)a or e)(1)b where a prompt investigation was not conducted;

d. an identification of each incident of deviation described in e)(1)a where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken;

e. an identification of each incident of deviation described in e)(1)b where prompt corrective action, that would bring the emissions unit into compliance with any federally enforceable emission limitation(s), operational restriction(s), and/or other control device operating parameter limitation(s), was determined to be necessary and was not taken;

f. an identification of each incident of deviation described in e)(1)a or e)(1)b where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit;

g. identification of the following information in accordance with the monitoring requirements for visible emissions in d)(2), d)(3) and/or d)(4) above:

i. all days during which any visible particulate emissions were observed from the stacks serving this emissions unit, the truck and railcar unloading, and the grain handling operations; and

ii. any corrective actions taken to minimize or eliminate the visible particulate emissions.

h. the probable cause of each deviation;

i. any corrective actions that were taken to remedy the deviations or prevent future deviations; and

j. the level or magnitude of excursion above the acceptable restricted limitation(s), operational restriction(s), and/or control device parameter limitation(s) and the duration (number of hours and date) of each deviation.

If no deviations/excursions occurred during a calendar quarter, the report shall so state that no deviations occurred during the reporting period.

The quarterly reports shall be submitted (postmarked) each year by the thirty-first of January (covering October to December), the thirtieth of April (covering January to March), the thirty-first of July (covering April to June), and the thirty-first of October (covering July to September), unless an alternative schedule has been established and approved by Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports which specify the total PE and PM_{10} emissions in tons per rolling 12-month period from this emissions unit for the previous calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation</u>

Each baghouse and bin vent filter for this emissions unit shall achieve an outlet emission rate of not greater than 0.005 gr PE /dscf.

<u>Applicable Compliance Method</u>

For Stacks S-20, S-26 the baghouse outlet PE concentration shall be determined through the performance testing as described in f)(2).

For Stacks S-20A, S-22, S-26A and the two concrete bin vent filters, if required, compliance may be demonstrated through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

b. <u>Emission Limitations</u>

Visible PE of fugitive dust from grain handling operations shall not exceed 0% opacity.

Visible PE of fugitive dust from truck and railcar unloading shall not exceed 5% opacity.

Visible PE from the baghouse and bin vent filter stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

c. Emission Limitations

PE and PM_{10} emissions from the baghouses serving this emissions unit shall not exceed 12.71 tons per rolling 12-month period.

Applicable Compliance Method

Compliance shall be based upon the record keeping requirements in d)(5) and shall be calculated using the exhaust grain loadings of the baghouses and bin vent filters as follows:

Emissions = S-20 Baghouse Emissions + S-20A Baghouse Emissions + S-22 Baghouse Emissions + S-26 Baghouse Emissions + S-26A Baghouse Emissions + Concrete Bin Vent Filter #1 Emissions + Concrete Bin Vent Filter #2 Emissions

Baghouse Emissions = (exhaust PE concentration) * (exhaust flow rate) * (60 min/hr) * (annual operating hours) / (7,000 gr/lb) / (2,000 lbs/ton)

S-20 Emissions = (PE gr/dscf from most recent stack test) * (48,000 dscf/min) * (60 min/hr) * (annual operating hours) / (7000 gr/lb) / (2000 lbs/ton)

S-20A Emissions = (0.005 gr/dscf) * (7,500 dscf/min) * (60 min/hr) * (annual operating hours) / (7,000 gr/lb) / (2,000 lbs/ton)

S-22 Emissions = (0.005 gr/dscf) * (2,750 dscf/min) * (60 min/hr) * (annual operating hours) / (7,000 gr/lb) / (2,000 lbs/ton)

S-26 Emissions = (PE gr/dscf from most recent stack test) * (5,950 dscf/min) * (60 min/hr) * (annual operating hours) / (7,000 gr/lb) / (2,000 lbs/ton)

S-26A Emissions = (0.005 gr/dscf) * (1,100 dscf/min) * (60 min/hr) * (annual operating hours) / (7,000 gr/lb) / (2,000 lbs/ton)

Concrete Bin Vent Filter #1 Emissions = (0.005 gr/dscf) * (1,200 dscf/min) * (60 min/hr) * (annual operating hours) / (7,000 gr/lb) / (2,000 lbs/ton)

Concrete Bin Vent Filter #2 Emissions = (0.005 gr/dscf) * (1,200 dscf/min) * (60 min/hr) * (annual operating hours) / (7,000 gr/lb) / (2,000 lbs/ton)

PM_{10} emissions from the baghouse are assumed to be equal to PE from the baghouse. Compliance with the allowable PM_{10} baghouse exhaust concentration is assumed with compliance of the PE baghouse exhaust concentration.

For stacks S-20 and S-26, the baghouse outlet PE concentration shall be determined through the performance testing as described in f)(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 between May 1, 2014 and September 30, 2014. Future testing will be required as needed and determined by Ohio EPA District Office or local air agency, and will be addressed in the Title V permit to be issued.

b. The emission testing shall be conducted to:

i. demonstrate compliance with the outlet concentration of 0.005 gr PE/dscf limitation for Stacks S-20 and S-26.

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

i. Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content; and

ii. Method 5 of 40 CFR Part 60, Appendix A for filterable PE.

Alternative U.S. EPA approved test methods may be used with prior approval from the Director (the appropriate District Office or 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 appropriate Ohio EPA District Office or local air agency.

e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or 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 Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

9. P902, DDGS Handling & Cooling

Operations, Property and/or Equipment Description:

DDGS Handling and Cooling controlled with a Baghouse venting to Stack S70.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Emissions from Stack S70 serving this emissions unit shall not exceed: Baghouse outlet particulate emissions (PE) shall not greater than 0.005 grain of grain per dry standard cubic foot (gr/dscf) of exhaust gases; PE shall not exceed 0.74 lb/hr and 3.24 tons per rolling 12-month period; Particulate matter less than 10 microns in diameter (PM_{10}) shall not exceed 0.74 lb/hr and 3.24 tons per rolling 12-month period; and Visible particulate emissions from Stack S70 shall not exceed 5% opacity, as a six-minute average. The fugitive emissions from this emissions unit shall not exceed: PE shall not exceed 1.30 lb/hr and 5.71 tons of per rolling 12-month period; PM_{10} shall not exceed 0.61 lb/hr and 2.67 tons per rolling 12-month period; and

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Visible particulate emissions of fugitive dust from this emissions unit shall not exceed 5% opacity as a three-minute average. See b)(2)a., b)(2)d and b)(2)f.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)e.
c.	ORC 3704.03(T)	Emissions from Stack S70 serving this emissions unit shall not exceed: VOC emissions shall not exceed 12.20 tons per rolling 12-month period. See b)(2)c. and b)(2)f.
d.	OAC rule 3745-17-07(A)(1)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
e.	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).
f.	OAC rule 3745-17-08(B)	The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

(2) Additional Terms and Conditions

a. Emissions from this source are vented to a baghouse. The majority of the baghouse exhaust is vented to and provides combustion air the thermal oxidizers associated with B001 and B002, which serves to control emissions for this portion. The remaining portion of the baghouse exhaust (approximately 17,208 scfm) is vented through Stack S70 associated with this emissions unit. The emissions limitations are based on the portion that vents to Stack S70 flare and operating 8,760 hours/year. The portion vented to and controlled by the thermal oxidizers is accounted for in emissions units B001 and B002.

b. Emissions from P005, P007, P008, P009, P010, P011, P013 (except emissions vented to the Stack S60 flare) and P902 (except emissions vented to Stack S70) are vented through and controlled by thermal oxidizer/waste heat recovery

boilers emissions units B001 and B002, which in turn vent to a common stack identified as Stack S10. The emissions limitations and other requirements for the Stack S10 are accounted for and included in the permit terms and conditions for emissions units B001 and B002, P005 and P007, and P008 through P011. The monitoring, recordkeeping, reporting, and testing requirements for the thermal oxidizer are established in permit terms and conditions for emissions units B001 and B002, and are sufficient to demonstrate compliance when emissions from this unit are vented to the B001 and B002.

c. The permittee shall meet the following requirements when operating this emissions unit:

   i. the use of the natural gas-fired thermal oxidizers to control VOC emissions that are not vented to Stack S70 that achieve 98% control ;

   ii. maintain enclosures to capture and vent emissions not vented to Stack S70 to the thermal oxidizers to ensure compliance; and

   iii. maintain enclosures to capture and vent emissions to a baghouse with an outlet particulate emissions concentration of 0.005 gr/dscf.

d. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

e. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

   Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for PE and PM10 emissions 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 dried distillers grain solubles (DDGS) throughput for this emissions unit shall not exceed 488,000 tons per rolling 12 month period;

   ii. baghouse outlet PE shall not greater than 0.005 gr/dscf of exhaust gases;

iii. PE from this emissions unit (combined stack plus fugitive) shall not exceed 8.95 tons of PE per rolling 12-month period;

iv. PM_{10} emissions from this emissions unit (combined stack plus fugitive) shall not exceed 5.91 tons per rolling 12-month period.

f. The PE and PM_{10} emissions limitations for Stack S70 are based on the PE grain loading from the baghouse, and operating 8760 hours/year. The fugitive PE and PM10 emissions limitations are based on the dried distillers grain solubles (DDGS) throughput of 488,000 tons per year. The handling and cooling throughput of DDGS for emissions unit P092 is directly related to the annual DDGS production of 488,000 tons per year (corresponding to an annual production of 154,000,000 gallons of denatured ethanol) for P008 through P011. Therefore, recordkeeping of DDGS production for P008 through P011 will satisfy the recordkeeping for emissions unit P902.

g. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) The handling and cooling of dried distillers grain solubles (DDGS) shall not exceed 488,000 tons, based upon a rolling, 12-month summation of the DDGS production.

(2) Except for the portion of the baghouse exhaust designed to vent to the atmosphere through Stack S70, all emissions from this emissions unit shall be vented to a thermal oxidizer.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across each baghouse is between 0.25 to 8 inches of water (manufacturer's specifications).

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(3) 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 S70 serving this emissions unit). 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.

(4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive emissions from the egress points (i.e. building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, including the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. 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.

(5) The permittee shall maintain monthly records of the following information:

a. the DDGS production rate, in tons;

b. the rolling, 12-month summation of the DDGS production, in tons;

c. the VOC emissions from Stack S70, in tons;

d. the PE and PM_{10} emissions (stack and fugitive) from this emissions unit, in tons;

e. the rolling, 12-month summation of VOC emissions from Stack S70, in tons; and

f. the rolling, 12-month summation of PE and PM_{10} emissions (combined stack plus fugitive) from this emissions unit, in tons.

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizers;

ii. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

iii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

iv. all exceedances of the rolling, 12-month summation of the DDGS production;

v. all exceedances of the rolling 12-month VOC emissions limitation for this emissions unit; and

vi. all exceedances of the rolling, 12-month PE, and PM_{10} limitations for this emissions unit.

b. Identification of the following information in accordance with the monitoring requirements for visible emissions in d)(3) above:

i. all days during which any visible particulate emissions were observed from Stack S70 serving this emissions unit; and

ii. any corrective actions taken to minimize of eliminate the visible particulate emissions.

c. Identification of the following information in accordance with the monitoring requirements for visible emissions in d)(4) above:

i. all days during which any visible fugitive particulate emissions were observed from the egress points (i.e. building windows, doors, roof monitors, etc.) serving this emissions unit; and

ii. any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions.

d. the probable cause of each deviation (excursion);

e. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

f. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports which specify the total PE, PM_{10}, and VOC emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

The VOC emissions from Stack S70 serving this emissions unit shall not exceed 12.20 tons per rolling 12-month period.

Applicable Compliance Method:

This 12-month limitation was developed by multiplying maximum annual DDGS throughput rate (488,000 tons/yr) by the emissions factor 0.05 lb-VOC/ton DDGS and dividing by 2000 lbs/ton. Compliance with shall be based upon the performance testing described in f)(2) and the recordkeeping requirements in d)(5).

b. Emissions Limitation:

The baghouse outlet particulate emissions shall not be greater than 0.005 gr/dscf of exhaust gases.

Applicable Compliance Method:

Compliance shall be determined through the performance testing described in f)(2).

c. Emissions Limitation:

The PE and the PM_{10} from Stack S70 serving this emissions unit shall not exceed 0.74 lb/hr and 3.24 tons of per rolling 12-month period

Applicable Compliance Method:

The hourly PE and hourly PM_{10} emissions limitations each were determined by multiplying the maximum baghouse airflow rate (17,208 scfm) by 60 minutes/hour multiplied by the PE concentration limitation (0.005 grain/dscf) and dividing by 7000 grains/lb. Compliance shall be determined through the performance testing described in f)(2). Compliance with the hourly PM_{10} emissions limitation shall be assumed by complying with the hourly PE limitation.

The 12-month rolling PE and PM_{10} emissions limitations were determined by multiplying the hourly emissions limitation by 8,760 hrs/year and dividing by

2,000 lbs/ton. Compliance with shall be based upon the recordkeeping requirements in d)(5).

Record keeping of the hourly emissions is not required since the emissions unit is permitted at its potential to emit.

d. Emissions Limitation:

The fugitive PE from this emissions unit shall not exceed shall not exceed 1.30 lb/hr.

Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum hourly DDGS throughput times the sum of the AP-42 Table 9.9.1-1 (March 2003) emission factor for grain handling emissions plus the AP-42 Table 9.9.1-2 (March 2003) emissions for grain stockpile loading emissions times 1 minus the enclosure control efficiency as follows:

Emissions = (DDGS throughput) * (grain handling emission factor + grain stock pile loading emission factor) * (1 - enclosure control efficiency)

Emissions = (55.7 tons/hr) * (0.061 lb/ton grain + 0.017 lb/ton grain) * (1 - 70%)

Emissions = 1.30 lb/hr

e. Emissions Limitation:

The fugitive PE from this emissions unit shall not exceed shall not exceed 5.71 tons per tolling 12-month period.

Applicable Compliance Method:

This limitation was determined by multiplying the maximum annual DDGS throughput times the sum of the AP-42 Table 9.9.1-1 (March 2003) emission factor for grain handling emissions plus the AP-42 Table 9.9.1-2 (March 2003) emission factor for the grain loading emissions times 1 minus the enclosure control efficiency as follows:

Emissions = (DDGS throughput) * (grain handling emission factor + grain stock pile loading emission factor) * (1 - enclosure control efficiency) * 1.0 ton/2,000 lbs

Emissions = (488,000 tons/yr) * (0.061 lb/ton grain + 0.017 lb/ton grain) * (1 - 70%) * 1.0 ton/2,000 lbs = 5.71 tons/year

Compliance with shall be based upon the recordkeeping requirements in d)(5).

f. Emissions Limitation:

The fugitive PM_{10} from this emissions unit shall not exceed 0.61 lb/hr.

Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum hourly DDGS throughput times the sum of the AP-42 Table 9.9.1-1 (March 2003) emission factor for grain handling emissions plus the AP-42 Table 9.9.1-2 (March 2003) emission factor for the grain stockpile loading emissions times 1 minus the enclosure control efficiency as follows:

Emissions = (DDGS throughput) * (grain handling emission factor + grain stock pile loading emission factor) * (1 - enclosure control efficiency)

Emissions = (55.7 tons/hr) * (0.034 lb/ton grain + 0.0025 lb/ton grain) * (1 - 70%)

Emissions = 0.61 lb/hr

g. Emissions Limitation:

The fugitive PM_{10} emissions from this emissions unit shall not exceed 2.67 tons per rolling 12-month period.

Applicable Compliance Method:

This limitation was determined by multiplying the maximum annual DDGS throughput times the sum of the AP-42 Table 9.9.1-1 (March 2003) emission factor for the grain handling emissions plus the AP-42 Table 9.9.1-2 (March 2003) emission factor grain stockpile loading emissions times 1 minus the enclosure efficiency as follows:

Emissions = (DDGS throughput) * (grain handling emission factor + grain stock pile loading emission factor) * (1 - enclosure control efficiency) * 1.0 ton/2,000 lbs

Emissions = (488,000 tons/yr) * (0.034 lb/ton grain + 0.0025 lb/ton grain) * (1 - 70%) * 1.0 ton/2,000 lbs = 2.67 tons/year

Compliance with shall be based upon the recordkeeping requirements in d)(5).

h. Emissions Limitation:

Visible particulate emissions from Stack S70 shall not exceed 5% opacity, as a six-minute average.

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).

i. Emission Limitation:

Visible PE of fugitive dust from this emission unit shall not exceed 5% opacity as a three-minute average

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)(3).

(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 between May 1, 2014 and September 30, 2014. Future testing will be required as needed and determined by Ohio EPA District Office or local air agency, and will be addressed in the Title V permit to be issued.

b. The emission testing shall be conducted to demonstrate compliance with:

i. the baghouse outlet concentration limitation of 0.005 gr PE/dscf;

ii. the PE and the PM_{10} emissions rate limitations of 0.74 lb/hr for Stack S70; and

iii. the VOC emissions rate limitation of 0.05 lb/ton DDGS for Stack S70.

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

i. Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;

ii. Method 5 of 40 CFR Part 60, Appendix A for filterable PE; and

iii. Methods 18, 25 or 25A from 40 CFR Part 60, Appendix A for total VOC.

Alternative U.S. EPA approved test methods may be used with prior approval from the Regional Air Pollution Control 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 appropriate Ohio EPA District Office or local air agency.

e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

10. P903, DDGS Loadout

Operations, Property and/or Equipment Description:

DDGS Loadout to Truck and Rail controlled with a Baghouse

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Particulate emissions (PE) and emissions of particulate matter less than 10 microns in diameter (PM_{10}) from the stack serving this emissions unit shall not exceed 0.39 lb/hr and 1.71 tons per rolling 12 month period. Fugitive PE shall not exceed 0.40 lb/hr and 0.24 tons per rolling 12 month period. Fugitive PM_{10} emissions shall not exceed 0.10 lb/hr and 0.06 tons per rolling 12 month period. Baghouse outlet particulate emissions (PE) shall not greater than 0.005 grain of grain per dry standard cubic foot (gr/dscf) of exhaust gases. See b)(2)c.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)d.
c.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 60% opacity.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	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).
e.	OAC rule 3745-17-08(B)	The facility 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).
f.	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3), as effective 11/30/01. Pursuant to Figure II of to OAC rule 3745-31-05(A)(3) PE from the stack serving this emissions unit shall not exceed 1.56 lbs/hr. See b)(2)f.

(2) Additional Terms and Conditions

a. The PE and PM10 emissions limitations for this emissions unit are based on the PE grain loading from the baghouse and operating 8760 hours/year. The fugitive PE and PM10 emissions limitations are based on the dried distillers grain solubles (DDGS) throughput of 488,000 tons per year

b. The permittee shall maintain enclosures to capture and vent emissions to a baghouse with an outlet particulate emissions concentration of 0.005 gr/dscf when operating this emissions unit.

c. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S.

EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for PE and PM10 emissions 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 dried distillers grain solubles (DDGS) throughput for this emission unit shall not exceed 488,000 tons per rolling 12 month period;

ii. baghouse outlet PE shall not greater than 0.005 gr/dscf of exhaust gases;

iii. PE from this emissions unit (combined stack plus fugitive) shall not exceed 1.95 tons of PE per rolling 12-month period;

iv. PM_{10} emissions from this emissions unit (combined stack plus fugitive) shall not exceed 1.77 tons per rolling 12-month period.

e. This limitation reflects the current State Implementation Plan (SIP) for Ohio approved by the U.S. EPA for OAC rule 3745-31-05, as indicated in b)(1)a.above. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then this emission limitation no longer applies.

f. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) The annual amount of dried distillers grain solubles (DDGS) processed through this emissions unit shall not exceed 488,000 tons, based upon a rolling, 12-month summation of the DDGS production.

(2) Emissions from this emissions unit shall be vented to a baghouse whenever the air contaminant source is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.25 to 8 inches of water (manufacturer's specifications).

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee

shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the

range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(3) 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 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.

(4) The permittee shall maintain monthly records of the following information:

a. the operating hours for each month;

b. the DDGS production rate for each month, in tons;

c. the PE and PM_{10} emissions (stack and fugitive) from this emissions unit, in tons;

d. the rolling, 12-month summation of the DDGS production, in tons; and

e. the rolling, 12-month summation of PE and PM_{10} emissions (combined stack plus fugitive) from this emissions unit, in tons.

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the

potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

ii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

iii. all exceedances of the rolling, 12-month limitation of the DDGS production; and

iv. all exceedances of the rolling, 12-month PE and PM_{10} emissions limitations for this emissions unit.

b. identification of the following information in accordance with the monitoring requirements for visible emissions in d)(3) above:

i. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

ii. any corrective actions taken to minimize or eliminate the visible particulate emissions.

c. the probable cause of each deviation (excursion);

d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

e. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports which specify the total PE, PM_{10}, and emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

The baghouse outlet particulate emissions shall not be greater than 0.005 gr/dscf of exhaust gases.

Applicable Compliance Method:

Compliance shall be determined through the performance testing described in f)(2).

b. Emission Limitation:

PE and PM_{10} emissions from the stack serving this emissions unit shall not exceed 0.39 lb/hr and 1.71 tons per year.

Applicable Compliance Method:

The hourly PE and hourly PM10 emissions limitations each were determined by multiplying the maximum baghouse airflow rate (9,100 scfm) by 60 minutes/hour multiplied by the PE concentration limitation (0.005 grain/dscf) and dividing by 7000 grains/lb. Compliance shall be determined through the performance testing described in f)(2). Compliance with the hourly PM10 emissions limitation shall be assumed by complying with the hourly PE limitation.

The 12-month rolling PE and PM10 emissions limitations were determined by multiplying the hourly emissions limitation by 8,760 hrs/year and dividing by 2,000 lbs/ton. Compliance with shall be based upon the recordkeeping requirements in d)(4).

Record keeping of the hourly emissions is not required since the emissions unit is permitted at its potential to emit.

c. Emission Limitation:

The fugitive PE from this emissions unit shall not exceed shall not exceed 0.40 lb/hr.

Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum hourly DDGS throughput times the sum of the AP-42 Table 9.9.1-2 (March 2003) emission factor for grain handling emissions plus the AP-42 Table 9.9.1-2 (March 2003) for the fugitive emissions times 1 minus the enclosure control efficiency as follows:

Emissions = (DDGS throughput) * (emission factor) * (1 - enclosure control efficiency)

Emissions = (400 tons/hr) * (0.0033 lb/ton DDGS) * (1 - 70%)

Emissions = 0.40 lb/hr

d. Emissions Limitation:

Fugitive PE shall not exceed 0. 24 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(4) and shall be calculated using AP-42 Table 9.9.1-2 (March 2003) for the fugitive emissions, as follows:

Emissions = (DDGS throughput) * (emission factor) * (1 - enclosure control efficiency) / (2000 lbs/ton)

Emissions = (DDGS throughput in tons per rolling 12-month period) * (0.0033 lb/ton DDGS) * (1 - 70%) / (2000 lbs/ton)

e. Emissions Limitation:

The fugitive PM_{10} from this emissions unit shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum hourly DDGS throughput times the sum of the AP-42 Table 9.9.1-2 (March 2003) emission factor for grain handling emissions plus the AP-42 Table 9.9.1-2 (March 2003) for the fugitive emissions times 1 minus the enclosure control efficiency as follows:

Emissions = (DDGS throughput) * (emission factor) * (1 - enclosure control efficiency)

Emissions = (400 tons/hr) * (0.0008 lb/ton DDGS) * (1 - 70%)

Emissions = 0. 10 lb/hr

f. Emissions Limitation:

The fugitive PM10 emissions from this emissions unit shall not exceed 0.06 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(4) and shall be calculated using AP-42 Table 9.9.1-2 (March 2003) for the fugitive emissions, as follows:

Emissions = (DDSG throughput) * (emission factor) * (1 - enclosure control efficiency) / (2000 lbs/ton)

Emissions = (DDGS throughput in tons per rolling 12-month period) * (0.0008 lb/ton DDGS) * (1 - 70%) / (2000 lbs/ton)

g. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 60% opacity.

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).

(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 between May 1, 2014 and September 30, 2014. Future testing will be required as needed and determined by Ohio EPA District Office or local air agency, and will be addressed in the Title V permit to be issued.

b. The emission testing shall be conducted to demonstrate compliance with:

i. the baghouse outlet concentration of 0.005 gr PE/dscf; and

ii. PE emission rate limitation of 0.39 lbs/hr for the stack serving this emissions unit.

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

i. Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content; and

ii. Method 5 of 40 CFR Part 60, Appendix A for filterable PE.

Alternative U.S. EPA approved test methods may be used with prior approval from the Regional Air Pollution Control 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 appropriate Ohio EPA District Office or local air agency.

e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or 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.

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 appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

11. P904, 4 Steel Storage Bins & Drying Bin

Operations, Property and/or Equipment Description:

Four Steel Grain Storage Bins (Bins #3 through #6) & Drying Bin (Bin #7)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Particulate matter less than 10 microns in diameter (PM_{10}) shall not exceed 2.82 lb/hr and 4.22 tons per rolling 12-month period. See b)(2)b. and b)(2)c.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)d.
c.	ORC 3704.03(T)	PE from this emissions unit shall not exceed 16.75 tons per rolling 12-month period.
d.	OAC rule 3745-31-05(D) (voluntary restrictions to establish potential to emit for PE and to avoid PSD)	PE from this emissions unit shall not exceed 16.75 tons per rolling 12-month period. See b)(2)d.
e.	OAC rule 3745-17-07(A)(1)	Visible PE from the stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-11(B)(1)	This emissions limitation is less stringent than hourly emissions rate that corresponds to the emission limitation established per ORC 3704.03(T). Pursuant to Table I of this rule the PE from this emissions unit shall not exceed 67.62 lbs/hr.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	40 CFR 60 Subpart DD - Standards of Performance for Grain Elevators	Visible PE of fugitive dust from grain handling operations shall not exceed 0% opacity.
h.	OAC rule 3745-17-07(B)	This emissions unit is exempt from the fugitive visible PE limitations as specified in this rule pursuant to OAC rule 3745-17-07(B)(11)(e).
i.	OAC rule 3745-17-08(B)	The facility 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 this rule.

(2) Additional Terms and Conditions

a. This equipment associated with this emissions unit consists of four grain steel storage bins (Bins #3 through #6) and drying bin (Bin #7), and a drying bin used for temporary storage prior to grain drying.

b. The hourly PM_{10} emissions limitation was established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

c. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05 (A)(3) do not apply to the PM10 emissions from this air contaminant source since the uncontrolled potential to emit for PM10 is less than 10 tons/yr.

Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for PE emissions 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 combined grain throughput for grain steel storage Bins #3 through #6 and the drying Bin #7 shall not exceed 1,340,000 tons per year; and

ii. PM10 from this emissions unit (from grain storage Bins #3 through #6 plus drying Bin #7) shall not exceed 4.22 tons per rolling 12-month period. [OAC 3745-31-05(D)]

e. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) The combined gain throughput for grain steel storage Bins #3 through #6 plus drying Bin #7 shall not exceed 1,340,000 tons per year.

d) 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 stacks serving this emissions unit. 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 emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions 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 perform daily checks, when the emissions unit is in operation, for any visible fugitive particulate emissions from this emission unit. 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. the total duration of any visible emission incident; and

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

(3) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the combined grain throughput for grain steel storage Bins #3 through #6 plus drying Bin #7, in tons;

b. the rolling 12-months summation of the combined grain throughput for grain steel storage Bins #3 through #6 plus drying Bin #7, in tons;

c. the PE and PM_{10} emissions exhausted from this emissions unit, in tons; and

d. the rolling 12-months summation of the PE and PM_{10} emissions from this emissions unit, in tons.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify any deviation or exceedance of a federally enforceable requirement contained in this permit to include:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all exceedances of the rolling, 12-month summation of the grain throughput limitation; and

ii. all exceedances of the rolling, 12-month summation of the PE and PM_{10} emissions limitations.

b. Identification of the following information in accordance with the monitoring requirements for visible emissions in d)(1) above:

i. all days during which any visible particulate emissions were observed from stacks serving this emissions unit; and

ii. any corrective actions taken to minimize or eliminate the visible particulate emissions.

c. Identification of the following information in accordance with the monitoring requirements for visible emissions in d)(2) above:

i. all days during which any visible fugitive particulate emissions were observed from the egress points (i.e. building windows, doors, roof monitors, etc.) serving this emissions unit; and

ii. any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions.

d. the probable cause of each deviation;

e. any corrective actions that were taken to remedy the deviations or prevent future deviations; and

f. the level or magnitude of excursion above the acceptable restricted limitation(s), operational restriction(s), and/or control device parameter limitation(s) and the duration (number of hours and date) of each deviation.

If no deviations/excursions occurred during a calendar quarter, the report shall so state that no deviations occurred during the reporting period.

The quarterly reports shall be submitted (postmarked) each year by the thirty-first of January (covering October to December), the thirtieth of April (covering January to March), the thirty-first of July (covering April to June), and the thirty-first of October (covering July to September), unless an alternative schedule has been established and approved by Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports which specify the total PE and PM_{10} in tons per rolling 12-month period, from this emissions unit for the previous calendar year. This report is due by January 31 of each year and shall cover the previous calendar year.

(3) The permittee shall submit annual reports which specify the total PE, PM_{10}, and emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions Limitation:</u>

PM_{10} shall not exceed 2.82 lb/hr.

Applicable Compliance Method:

Compliance shall be calculated using AP-42 Table 9.9.1-1 (March 2003) and inputs representing the Potential To Emit (PTE), as follows:

Emissions = Storage Bins Emissions + Drying Bin Emissions

Storage Bins Emissions = (storage bins grain throughput) * (emission factor)

Storage Bins Emissions = (195 tons/hr) * (0.0063 lb/ton grain)

Storage Bins Emissions = 1.23 lb/hr

Drying Bin Emissions = (drying bin grain throughput) * (emission factor)

Drying Bin Emissions = (252 tons/hr) * (0.0063 lb/ton grain)

Drying Bin Emissions = 1.59 lb/hr

Emissions = 2.82 lb/hr

b. Emissions Limitation:

PM_{10} shall not exceed 4.22 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon record keeping requirement in d)(3) and shall be calculated using AP-42 Table 9.9.1-1 (March 2003) and inputs representing the Potential To Emit (PTE), as follows:

Emissions = (combined grain throughput) * (emission factor)

Emissions = (1,340,000 tons grain per rolling 12-month period) * (0.0063 lb/ton grain) / 2000 lbs/ton

Emissions = 4.22 tons per rolling 12-month period

c. Emissions Limitation:

PE from this emissions unit shall not exceed 16.75 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon record keeping requirement in d)(3) and shall be calculated using AP-42 Table 9.9.1-1 (March 2003) and inputs representing the Potential To Emit (PTE), as follows:

Emissions = (combined grain throughput) * (emission factor)

Emissions = (1,340,000 tons grain per rolling 12-month period) * (0.025 lb/ton grain) / 2000 lbs/ton

Emissions = 16.75 tons per rolling 12-month period

d. Emissions Limitation:

Visible PE of fugitive dust from grain handling operations shall not exceed 0% opacity.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

g) Miscellaneous Requirements

(1) None.

12. T003, Gasoline Tank

Operations, Property and/or Equipment Description:

200,000 gallon Above Ground Internal Floating Roof Storage Tank (Gasoline Denaturant Tank)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Volatile organic compound (VOC) emissions shall not exceed 0.38 lb/hour and 1.65 tons per year. See b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)c.
c.	OAC rule 3745-21-09(L)	See b)(2)d.
d.	40 CFR Part 60, Subpart Kb	See b)(2)e., d)(2) through d)(8), e)(2) and e)(3).

(2) Additional Terms and Conditions

a. The emissions limitations for this emissions unit are based on an annual throughput of 10,000 gallons of denaturant.

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S.

EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this emissions unit since the uncontrolled potential to emit for VOC is less than 10 tons/year.

d. The permittee shall install the following control equipment and shall maintain tank vents, seals, and or covers as follows:

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

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

iii. All openings, except stub drains, shall be equipped with a cover, seal, or lid which is to be in a closed position at all times, except when in actual use for tank gauging or sampling.

e. Per 40 CFR Part 60, Subpart Kb, the fixed-roof vessel, equipped with an internal floating roof, must meet the following specifications:

i. 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.

ii. 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:

(a) 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.

(b) 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.

(c) 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.

iii. Each opening in a noncontact 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.

iv. 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.

v. 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.

vi. 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.

vii. 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.

viii. 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.

ix. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

f. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01.

c) Operational Restrictions

(1) This above-ground storage tank shall only be used to store gasoline denaturant.

(2) The annual gasoline denaturant throughput for this emissions unit shall not exceed 10,000,000 gallons based upon a rolling, 12-month summation of the gasoline denaturant throughput.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information:

a. the monthly gasoline denaturant throughput for each month, in gallons; and

b. the annual (summation of the monthly) gasoline denaturant throughput, in gallons.

(2) The permittee shall maintain records of the following information in a readily accessible location for at least five years and shall make copies of the records available upon request:

a. the types of petroleum liquids stored in the tank; and

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 1.0 pound per square inch absolute.

(3) The permittee shall 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 the volatile organic liquid (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.

(4) If the vessel is equipped with a liquid-mounted or mechanical shoe primary seal, the permittee shall visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days.

If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Regional Air Pollution Control Agency in the inspection report required in e)(3)c. 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.

(5) If the vessel is equipped with a double-seal system as specified in b)(2)d.ii.(b), the permittee shall:

a. visually inspect the vessel as specified in d)(6) at least every 5 years; or

b. visually inspect the vessel as specified in d)(4).

(6) The permittee shall visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in d)(4) and d)(5)b and at intervals no greater than 5 years in the case of vessels specified in d)(5)a.

(7) The permittee shall keep the following records per 40 CFR Part 60, Subpart Kb:

a. the dimension of the storage vessel and an analysis showing the capacity of the storage vessel, kept for the life of the source; and

b. a record of the volatile organic liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period, kept for at least 2 years.

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.

(8) The permittee shall maintain a record of any period of time in which the automatic bleeder vents, rim vents, and all openings other than stub drains were not maintained as required in this permit.

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all exceedances of the annual gasoline denaturant throughput limitation.

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall notify the Regional Air Pollution Control Agency in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by d)(3) and d)(6) to afford the Regional Air Pollution Control Agency the opportunity to have an observer present. If the inspection required by d)(6) is not planned and the permittee could not have known about the inspection 30 days in advance or refilling the tank, the permittee shall notify the Regional Air Pollution Control Agency 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 Regional Air Pollution Control Agency at least 7 days prior to the refilling.

(3) The permittee shall meet the following requirements while operating this emissions unit and its associated control equipment (fixed roof and internal floating roof):

a. furnish the Regional Air Pollution Control Agency with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR Part 60, Subpart Kb. This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3);

b. keep a record of each inspection performed as required in d)(3) through d)(6). 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);

c. if any of the conditions described in d)(4) are detected during the annual visual inspection required by d)(4), a report shall be furnished to the Regional Air Pollution Control Agency 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; and

d. after each inspection required by d)(5) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in d)(5)b, a report shall be furnished to the Regional Air Pollution Control Agency within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of d)(3) and d)(5) and list each repair made.

The permittee shall keep copies of all reports and records required by e)(3) for at least 5 years.

(4) The permittee shall notify the Regional Air Pollution Control Agency within 30 days of the occurrence, of any period of time in which the automatic bleeder vents, rim vents, and all openings other than stub drains were not maintained as required in this permit.

(5) The permittee shall submit annual reports which specify the total VOC, single HAP and combined HAPs emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

VOC emissions shall not exceed 0.38 lb/hour and 1.66 tons per year.

<u>Applicable Compliance Method:</u>

The hourly VOC emissions limitation was based on the gasoline denaturant throughput limitation and reflects the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this short term emissions limitation.

Compliance with the annual VOC emissions limitation is based on compliance with the gasoline denaturant throughput limitation and demonstrated through the recordkeeping requirements of d)(1).

g) Miscellaneous Requirements

(1) None.

13. Emissions Unit Group - Cook, Yeast, Distill & Dehydrate: P005, P007

EU ID	Operations, Property and/or Equipment Description
P005	Mash and Yeast Operations (Mash Water Tank, Mingler, Slurry Tank and Cooker) Controlled with Recuperative Thermal Oxidizers
P007	Distillation Process (Distillation Columns, Stillage, and Condensation Equipment) controlled with Recuperative Thermal Oxidizers

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) b)(1)c.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Emissions from Stack S10 serving these emissions units shall not exceed 2.00 lb VOC/hour and 8.76 tons per rolling 12 month period. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)c.
c.	OAC rule 3745-31-05(D) (voluntary restrictions to establish potential to emit for HAP)	Emissions from Stack S10 serving these emissions units shall not exceed: 3.86 tons of single HAP per rolling 12-month period and; 7.79 tons of combined HAPS per rolling 12-month period.
d.	ORC 3704.03(F) and OAC rule 3745-114-01	See d)(5), d)(6) and e)(3).
e.	OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subpart VV	See the requirements for emissions unit P801.

(2) Additional Terms and Conditions

a. Emissions from P005, P007, P008, P009, P010, P011, P013 (except emissions vented to the Stack S60 flare) and P902 (except emissions vented to Stack S70) are vented through and controlled by thermal oxidizer/waste heat recovery boilers emissions units B001 and B002, which in turn vent to a common stack identified as Stack S10. The emissions limitations and other requirements for the Stack S10 are accounted for and included in the permit terms and conditions for emissions units B001 and B002, P005 and P007, and P008 through P011. The monitoring, recordkeeping, reporting, and testing requirements for the thermal oxidizer are established in permit terms and conditions for emissions units B001 and B002, and are sufficient to demonstrate compliance when emissions from these emissions units are vented to emissions units B001 and B002.

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for VOC emissions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

i. implementation of a fugitive leak detection and repair program (LDAR) for all the miscellaneous process equipment associated with this emissions unit;

ii. emissions from these emissions units, P005 and P007, shall be vented to emission units B001 and B002 to control emissions;

iii. maintain enclosures and vent all the emissions to the thermal oxidizer to ensure compliance;

iv. the amount of 190 proof ethanol production shall not exceed 219,000,000 gallons per rolling 12 month period; and

v. emissions units B001 and B002 shall be operated and achieve a minimum VOC destruction efficiency of 98% for controlling the VOC emissions vented to them from emissions units P005, P007, P008, P009, P010, P011, P013 and P902.

d. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

e. The permittee shall include the appropriate process equipment and regulated components in a site fugitive Leak Detection and Repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (includes operational restrictions, monitoring and recordkeeping, reporting, and testing) of OAC rule 3745-21-09(DD) Leaks from process units that produce organic chemicals, and 40 CFR 60 Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry).

f. Emissions unit P005 consists of a cook water tank (negligible emissions), slurry blender/mixer [not vented but connected to the slurry tanks which vent to the thermal oxidizer, (TO)], two slurry tanks (vent to TO), two cook tubes (not vented), flash tank (not vented), two liquefaction tanks (negligible emissions), two yeast tanks (vent to TO), CIP screen (vent to TO), acid wash tank (vent to TO) and other ancillary equipment and tanks.

g. Emissions unit P007 consists of a beer column (not vented), side stripper (not vented), rectifier column (not vented), 190 proof condenser (not vented), reflux tank (not vented), regen tank (vent to TO), molecular sieve (not vented), eight evaporators (not vented), six centrifuges (vent to TO), two centrate tanks (vent to TO), syrup tank (negligible emissions), thin stillage tank (negligible emissions), whole stillage tank (negligible emissions) and other ancillary equipment and tanks.

h. The operations and production for emissions units P005 and P007 are related to the annual DDGS production of 488,000 tons per year for P008 through P011 This corresponds to an annual production of 154,000,000 gallons of denatured ethanol and an annual production of 219,000,000 gallons of 190 proof ethanol for the plant.

The VOC lb/hr is based on a VOC emission rate of 0.08 lb VOC/1,000 gallons of 190 proof ethanol derived as follows:

VOC emission rate = (219,000,000 gallons/year) / (8760 hr/year) * 0.08 lb/1000 gallons = 2.00 lb/hour

c) Operational Restrictions

(1) The annual production of dried distillers grain solubles (DDGS) production from P008 through P011 shall not exceed 488,000 tons per rolling 12-month period (corresponding to a rolling 12-month production of 154,000,000 gallons of denatured alcohol)

(2) The annual production of 190 proof ethanol production shall not exceed 219,000,000 gallons per rolling 12 month period.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for each 3-hour block of time when any emissions unit controlled by a thermal oxidizer is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance. The minimum combustion temperature is subject to revision if acceptable emission testing is conducted that demonstrates the emission units and the control device is in compliance at a different combustion temperature.

A "3-hour block of time" is defined as a successive, non-overlapping 3-hour block of time.

(2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation, including periods of startup and shutdown. 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 record the following information each day the emissions unit is in operation:

a. each 3-hour block of time [as defined in d)(1)], when any emissions unit controlled by the thermal oxidizer was in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

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

(3) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(4) The permittee shall maintain monthly records of the following information:

a. the operating hours;

b. production of DDGS, in tons;

c. production of 190 proof ethanol, in gallons;

d. the rolling, 12-month summation of the DDGS production, in tons;

e. the rolling, 12-month summation of the production of 190 proof ethanol, in gallons;

f. the VOC, single HAP and combined HAP emissions from these emissions units, in tons; and,

g. the rolling, 12-month summation of VOC, single HAP and combined HAP emissions from these emissions units, in tons.

(5) The permit to install (PTI) for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system (via stack S10), as specified by the permittee in the PTI 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 PTI 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 (mg/m^3): 33.20
Maximum Hourly Emission Rate (lbs/hr): 0.37
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 56.61
MAGLC (µg/m^3): 790.36

Pollutant: Formaldehyde
TLV (mg/m^3): 0.27
Maximum Hourly Emission Rate (lbs/hr): 0.45
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 4.73
MAGLC (µg/m^3): 6.47

Pollutant: Hexane
TLV (mg/m3): 176.23
Maximum Hourly Emission Rate (lbs/hr): 0.88
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 134.64
MAGLC (µg/m3): 4,196.12

(6) The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(b), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. 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.).

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each 3-hour block of time [as defined in d)(1)] (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;

ii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer;

iii. all exceedances of the rolling, 12-month summation of the DDGS production;

iv. all exceedances of the rolling, 12-month summation of the 190 proof ethanol production; and

v. all exceedances of the rolling, 12-month VOC, single HAP and combined HAP emissions limitation for emissions from these emission units.

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports that describe any changes to this emissions unit which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year

(3) The permittee shall submit annual reports which specify the total VOC, single HAP and combined HAPs emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions Limitation:</u>

Emissions from Stack S10 serving these emissions units shall not exceed 2.00 lb VOC/hour and 8.76 tons per rolling 12 month period

<u>Applicable Compliance Method:</u>

The hourly VOC emissions limitation was determined by multiplying the maximum annual 190 proof ethanol production rate of 219,000,000 gallons by the emissions factor of 0.08 lb-VOC/1000 gallons of 190 proof ethanol, and dividing by 8760 hours/year. Compliance shall be demonstrated by the applicable compliance method and through performance testing described in the testing requirements for emissions units B001 and B002.

Compliance with the rolling 12-month limitation shall be based upon record keeping requirements in d)(4) and shall be calculated by multiplying the monthly 190 proof ethanol production rate by the 2.00 lb-VOC/1000 gallons of 190 proof ethanol emissions factor, or the emissions factor determined from performance testing described in the testing requirements for emissions units B001 and B002, and dividing by 2,000 lbs/ton.

b. <u>Emissions Limitation:</u>

Emissions from Stack S10 serving this emissions unit shall not exceed:

3.86 tons of single HAP per rolling 12-month period; and

7.79 tons of combined HAPs per rolling 12-month period.

Applicable Compliance Method:

The individualsingle HAP emissions are determined by the combination of the following:

i. multiplying the maximum total heat input rate for emissions units B001-B002 and P008 through P011 (i.e., 490 mmBTU/hr) by emission factors for combustion of natural gas from Tables 1.4-3 and 1.4-4 (7/98) of AP-42, Compilation of Air Pollution Emission Factors, Volume I: Stationary Point and Area Sources; Fifth Edition, multiplied by 8760 hours/year and dividing by 2000 lbs/ton; and

ii. multiplying the maximum annual DDGS production rate of 488,000 tons/year by the HAPs emission factors specified in the application for this permit or emissions factors determined from testing on Stack S10.

Compliance shall be based upon the record keeping requirements in d)(4) and the by calculating the emissions rate for each individual HAP and dividing by 2,000 pounds/ton.

The emissions for the combined HAPs are determined by summing the emissions calculated above for each individual HAP.

g) Miscellaneous Requirements

(1) None.

14. Emissions Unit Group - DDGS Dryers: P008, P009, P010, P011

EU ID	Operations, Property and/or Equipment Description
P008	50 mmBtu/hr DDGS Dryer No. controlled with a Recuperative Thermal Oxidizer
P009	50 mmBtu/hr DDGS Dryer No. controlled with a Recuperative Thermal Oxidizer
P010	50 mmBtu/hr DDGS Dryer No. controlled with a Recuperative Thermal Oxidizer
P011	50 mmBtu/hr DDGS Dryer No. controlled with a Recuperative Thermal Oxidizer

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) b)(1)f.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Emissions from Stack S10 serving these emissions units shall not exceed 2.00 lb VOC/hour and 8.76 tons per rolling 12 month period. See b)(2)a. and b)(2)i.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)j.
c.	ORC 3704.03(T)	Emissions from Stack S10 serving these emissions units shall not exceed: Nitrogen oxides (NO_X) emissions shall not exceed 49 lb/hour, as a 30-day rolling average at all times, including periods of startup, shutdown and malfunction; Carbon monoxide (CO) emissions shall not exceed 28.08 lb/hour; Sulfur dioxide (SO_2) emissions shall not exceed 30.55 lb/hour; and Particulate emissions (PE) and emissions of particulate matter less than 10 microns in diameter (PM_{10}) shall not exceed 4.41

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		lb/hour; and Visible PE from the stack serving these emissions units shall not exceed 10% opacity, as a six-minute average. See b)(2)a. and b)(2)b., and b)(2)h.
d.	OAC rule 3745-31-05(D) (synthetic minor to avoid PSD for NOx) and (voluntary restrictions to establish potential to emit for HAPS)	Emissions from Stack S10 serving these emissions units shall not exceed: 214.62 tons of NO_X per rolling 12-month period. Emissions from Stack S10 serving these emissions units shall not exceed: 3.86 tons of single HAP per rolling 12-month period and; 7.79 tons of combined HAPS per rolling 12-month period. See b)(2)c. and c)(1). See B.2. and B.3 in Section B. Facility-Wide Terms and Conditions.
e.	OAC rule 3745-17-07(A)(1) and OAC rule 3745-17-10(B)(1)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3). to ORC 3704.03(T).
f.	OAC rule 3745-18-06	These emissions units are exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
g.	ORC 3704.03(F) and OAC rule 3745-114-01	See d)(10), d)(11) and e)(4).

(2) Additional Terms and Conditions

a. Emissions from P005, P007, P008, P009, P010, P011, P013 (except emissions vented to the Stack S60 flare) and P902 (except emissions vented to Stack S70) are vented through and controlled by thermal oxidizer/waste heat recovery boilers emissions units B001 and B002, which in turn vent to a common stack identified as Stack S10. The emissions limitations and other requirements for the Stack S10 are accounted for and included in the permit terms and conditions for emissions units B001 and B002, P005 and P007, and P008 through P011. The

monitoring, recordkeeping, reporting, and testing requirements for the thermal oxidizer are established in permit terms and conditions for emissions units B001 and B002, and are sufficient to demonstrate compliance when emissions from these units are vented to emissions units B001 and B002.

b. Best available technology (BAT) control requirements for these emissions units has been determined the following in addition to those specified above:

i. the use of low NO_X burners in B001, B002 and P008 through P011;

ii. emissions from these emissions units, P008 through P011, shall be vented to emission units B001 and B002 to control emissions;

iii. maintain enclosures and vent all the emissions to the thermal oxidizers to ensure compliance.

BAT also includes compliance with the terms and conditions of this permit. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. The following restrictions limit the potential to emit for CO, NOx, SO2, VOC, PE, PM10, and HAPs under OAC rule 3745-31-05 (D) and avoid Prevention of Significant Deterioration (PSD) for NOx under OAC rule 3745-31-05(D).

The permittee shall meet the following requirements when operating these emissions units:

i. The amount of dried distillers grain soluble (DDGS) production from P008 through P011 shall not exceed 488,000 tons per rolling 12 month period.

ii. The amount of 190 proof ethanol production shall not exceed 219,000,000 gallons per rolling 12 month period;

iii. The maximum combined heat input to B001, B002 and P008 through P011 shall not exceed 490 mmBtu/hr.

iv. Emissions units B001 and B002 shall be operated and achieve a minimum VOC destruction efficiency of 98% for controlling the VOC emissions vented to them from emissions units P005, P007, P008, P009, P010, P011, P013 and P902.

v. Emissions units B001 and B002 shall be operated and achieve a minimum CO destruction efficiency of 90% for controlling the CO emissions vented to them from emissions units P005, P007, P008, P009, P010, P011, P013 and P902.

d. Based upon the 12-month production limitation of 488,0000 tons of dried distillers grain solubles (DDGS), and the 12-month production limitation of 219,000,000 gallons of 190 proof ethanol production:

i. 214.62 tons of NO_x per rolling 12-month period;

ii. 102.48 tons of CO per rolling 12-month period;

iii. 111.51 tons of SO_2 per rolling 12-month period;

iv. 16.10 tons of PE and PM_{10} per rolling 12-month period;

v. 8.76 tons of VOC per rolling 12-month period;

vi. 3.86 tons of single HAP per rolling 12-month period; and

vii. 7.79 tons of combined HAPs per rolling 12-month period.

e. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

f. The permittee shall maintain a written quality assurance/quality control plan for the continuous NO_X monitoring system, designed to ensure continuous valid and representative readings of NO_X emissions in units of the applicable standards (lbs/mmBtu of actual heat input). The plan shall follow the requirements of Appendix F - Quality Assurance Procedures of 40 CFR Part 60 - Standards of Performance for New Stationary Sources. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_X monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

g. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

The continuous NO_x monitoring system utilized for these emissions units P008 through P011 is the same as that used for emissions units B001 and B002.

h. The maximum annual DDGS production for P008 through P011 is 488,000 tons per year. This corresponds to an annual production of 154,000,000 gallons of denatured ethanol and an annual production of 219,000,000 gallons of 190 proof ethanol for the plant.

The VOC lb/hr is based on a VOC emission rate of 0.08 lb VOC/1,000 gallons of 190 proof ethanol derived as follows:

VOC emission rate = (219,000,000 gallons/year) / (8760 hr/year) * 0.08 lb/1000 gallons = 2.00 lb/hour

The lb/hr limits for CO, SO2, and PE/PM10 are based upon lb/ton-DDGS emission factors specified in the application for this PTI and correlate the lb/1000 gallon 190 proof emissions rates as follows:

Maximum annual 190 proof ethanol production = 219,000,000 gallons/year (corresponds to 146,666,667 gallons of 200 proof)

Hourly average 190 proof ethanol production = (219,000,000 gallons/year) / (8760 hours/year) = 25,000 gallons/hr

CO average emission rate = (28.08 lb CO/hr) / (25,000 gallons/hr) = 1.12 lb CO/1,000 gallons of 190 proof ethanol

SO_2 average emission rate = (30.55 lb SO_2/hr) / (25,000 gallons/hr) = 1.22 lb SO_2/1,000 gallons of 1990 proof ethanol

PE and PM_{10} average emission rate = (4.41 lb PE and PM_{10}/hr) / (25,000 gallons/hr) = 0.18 lb PE and PM_{10} /1,000 gallons of 190 proof ethanol

i. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

j. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for VOC emissions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

i. emissions from these emissions units, P008 through P011, shall be vented to emission units B001 and B002 to control emissions;

ii. maintain enclosures and vent all the emissions to the thermal oxidizer to ensure compliance;

iii. the amount of 190 proof ethanol production shall not exceed 219,000,000 gallons per rolling 12 month period; and

iv. emissions units B001 and B002 shall be operated and achieve a minimum VOC destruction efficiency of 98% for controlling the VOC

emissions vented to them from emissions units P005, P007, P008, P009, P010, P011, P013 and P902.

c) Operational Restrictions

(1) The annual production of dried distillers grain solubles (DDGS) from emissions units P008 through P011 shall not exceed 488,000 tons per rolling 12-month period (corresponding to a rolling 12-month production of 154,000,000 gallons of denatured alcohol per rolling 12-month period).

(2) The annual production of 190 proof ethanol production shall not exceed 219,000,000 gallons per rolling 12 month period.

(3) The permittee shall burn only natural gas or biomethanator off-gases from emissions unit P013 in this emissions unit.

(4) The maximum combined heat input to emissions units B001, B002 and P008 through P011 shall not exceed 490 mmBtu/hr.

(5) Prior to using steam injection in the dryers emissions units P008 through P011, the permittee shall conduct compliance performance emissions testing, while using steam injection, as specified in the requirements for B001 and B002.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas or biomethanator off-gasses from emissions unit P013, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(2) The permittee shall maintain a daily record of the type and quantity of fuel burned in emissions units P008, P009, P010 and P011 and the hourly average heat input (expressed in mmBtu/hr).

(3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer B001 and B002, for each 3-hour block of time when any emissions unit controlled by a thermal oxidizer is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance. The minimum combustion temperature is subject to revision if acceptable emissions testing is conducted that demonstrates the emission units and the control device is in compliance at a different combustion temperature.

A “3-hour block of time” is defined as a successive, non-overlapping 3-hour block of time.

(4) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation, including periods of startup and shutdown. 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 record the following information each day the emissions unit is in operation:

a. each 3-hour block of time [as defined in d)(3)], when any emissions unit controlled by the thermal oxidizer was in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

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

(5) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(6) 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 S10 serving this emissions unit. 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.

(7) The permittee shall maintain on site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous NO_X monitoring system installed in Stack S10 has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

(8) The permittee shall operate and maintain equipment to continuously monitor and record NO_X emissions from Stack S10 these emissions units in units of the applicable standards (lbs/hour and lbs/mmBtu of actual heat input). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous NO_X monitoring system for Stack S10 including, but not limited to:

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

b. emissions of NO_X in pounds per hour and in all units of the applicable standards (lbs/mmBtu of actual heat input) in the appropriate averaging periods (30-day rolling average- each day ends a 30 day period.)

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. the total NO_X emissions for the month;

g. hours of operation of the emissions unit and the continuous NO_X monitoring system;

h. the date, time, and hours of operation of the emissions unit without the continuous NO_X monitoring system;

i. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous NO_X monitoring system;

j. the reason (if known) and the corrective actions taken (if any) for each such event in d)(7)h and d)(7)I; and

k. The daily records required for emissions units B001 and B002 by 40 CFR 60 Subpart Db Subsection 60.49b(g), including the average hourly NO_x emission rate and the 30-day average NO_x emission rate expressed in lb/mmBtu heat input.

The daily average hourly NO_x emission rates for B001 and B002 shall be calculated using the following equation:

$$NO_x\ ER_{B001\ \&\ B002} = (NO_x\ ER_{Stack\ S10} - NO_x\ ER_{P008\text{-}P011})/\text{Heat Input}_{B001\ \&\ B002}$$

Where:

$NO_x\ ER_{B001\ \&\ B002}$ = the average hourly NO_x emission rate (lb/mmBtu) for B001 and B002;

NO_x $ER_{Stack\ S10}$ = the average hourly NO_x emission rate (lb/hr) measured by the Stack S10 CEMS;

NO_x $ER_{P008\text{-}P011}$ = the average hourly NO_x emission rate (lb/hr) for Dryers P008 - P011 determined by multiplying the average hourly natural gas usage in P008 - P011 by the emissions factor for $NO_x$from USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4 Table 1.4-1 (7/98)]; and

Heat $Input_{B001\ \&\ B002}$ = the average hourly total heat input (mmBtu/hr) to B001 and B002

The 30-day average NO_x emission rates for B001 and B002 shall be calculated using the following equation:

NO_x $ER_{B001\&B002}$ = Sum of the Daily Average Hourly NO_x Emission Rates for the Most Recent 30-day period/30

(9) The permittee shall maintain monthly records of the following information:

a. The operating hours;

b. the DDGS production rate, in tons;

c. the rolling, 12-month summation of the DDGS production, in tons;

d. production of 190 proof ethanol, in gallons;

e. the rolling, 12-month summation of the production of 190 proof ethanol, in gallons;

f. the NO_x, CO, SO_2, PE, PM_{10}, VOC, single HAP and combined HAP emissions from Stack S10, in tons; and

g. the rolling, 12-month summation of NO_X, CO, SO_2, PE, PM_{10}, VOC, single HAP and combined HAP emissions from Stack S10, in tons.

(10) The permit to install (PTI) for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system (via stack S10), as specified by the permittee in the PTI 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 PTI 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 (mg/m^3): 33.20

Maximum Hourly Emission Rate (lbs/hr): 0.37
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 56.61
MAGLC (µg/m^3): 790.36

Pollutant: Formaldehyde
TLV (mg/m^3): 0.27
Maximum Hourly Emission Rate (lbs/hr): 0.45
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 4.73
MAGLC (µg/m^3): 6.47

Pollutant: Hexane
TLV (mg/m3): 176.23
Maximum Hourly Emission Rate (lbs/hr): 0.88
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 134.64
MAGLC (µg/m3): 4,196.12

(11) The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(b), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. 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.).

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or biomethanator off-gasses from emissions unit P013 was burned in the emissions units P008 P009, P010 and/or P011. These reports shall be submitted to the Regional Air Pollution Control Agency within 30 days after the deviation occurs.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each 3-hour block of time [as defined in d)(2)] (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;

ii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer;

iii. all exceedances of the rolling, 12-month summation of the DDGS production;

iv. all exceedances of the rolling, 12-month summation of the 190 proof ethanol production,

v. all exceedances of the rolling, 12-month NO_X, CO, SO_2, PE, PM_{10}, VOC, single HAP and combined HAP emissions limitation for emissions from Stack S10; and

vi. any day during which any visible particulate emissions not representative of normal operations were observed from Stack S-10 serving these emissions units (in accordance with the monitoring requirements for visible emissions in d)(6) above).

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_X monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA

District Office or local air agency, documenting all instances of NO_X emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations (i.e., lbs/hr as a 30-day rolling average, and lbs/mmBtu of actual heat input as a 30-day rolling average). The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standards (i.e., lbs/mmBtu of actual heat input as a 30-day rolling average).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NO_X and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

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

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

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

viii. results and dates of quarterly cylinder gas audits;

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

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_X monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction** of the continuous NO_X monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime** of the continuous NO_X monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(3)b.xi and e)(3)b.xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

(4) The permittee shall submit annual reports that describe any changes to this emissions unit emissions units P008, P009, P010 and/or P011 which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year.

(5) The permittee shall submit annual reports which specify the total NOx, SO2, PE, PM10, VOC, single HAP and combined HAPs emissions in tons per rolling 12-month period from Stack S-10 for the previous calendar year. This report is due by January 31st of each year and shall cover the previous calendar year.

(6) The permittee shall submit annual reports which specify the total NO_X, CO, SO_2, PE, PM_{10}, VOC, single HAP and combined HAPs emissions from this emissions unit for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions Limitation</u>

NO_X emissions from Stack S10 serving these emissions units shall not exceed 49 lb/hour as a 30-day rolling average at all times, including periods of startup, shutdown and malfunction.

<u>Applicable Compliance Method</u>

The hourly NO_x emissions limitation was determined using the 0.10 lb/mmBtu emissions factor for $NO_x$from USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4 Table 1.4-1 (7/98) and multiplying by the maximum of 490 mmBTU/hr heat input for B001, B002 and P008 through P011.

Compliance shall be demonstrated based upon the recordkeeping requirements in d)(8)b. through the data collected as required in 2)(b)f. and d)(7), and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

b. Emissions Limitation:

Emissions from Stack S10 serving these emissions units shall not exceed:

CO emissions shall not exceed 28.08 lb/hour;

VOC emissions shall not exceed 2.00 lb/hour;

SO_2 emissions shall not exceed 30.55 lb/hour; and,

PE and PM_{10} shall not exceed 4.41 lb/hour.

Applicable Compliance Method:

Compliance shall be demonstrated by the applicable compliance method and through performance testing described in the testing requirements for emissions units B001 and B002.

c. Emissions Limitation:

Visible PE from the stack serving these emissions units shall not exceed 10% opacity, as a six-minute average.

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).

d. Emissions Limitation:

Emissions from Stack S10 serving these emissions units shall not exceed:

214.62 tons of NO_X per rolling 12-month period.

Applicable Compliance Method:

The annual NO_x emissions limitation was determined by multiplying the hourly emissions limitation by 8760 hours/year and dividing by 2000 lbs/ton.

Compliance shall be based upon the record keeping requirements in d)(8) and shall be based on the data collected as required in d)(7) and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

e. Emissions Limitation:

Emissions from Stack S10 serving these emissions units shall not exceed:

3.86 tons of single HAP per rolling 12-month period; and

7.79 tons of combined HAPs per rolling 12-month period.

Applicable Compliance Method:

The individual single HAP emissions are determined by the combination of the following:

i. multiplying the maximum total heat input rate for emissions units B001-B002 and P008 – P011 (i.e., 490 mmBTU/hr) by emission factors for combustion of natural gas from Tables 1.4-3 and 1.4-4 (7/98) of AP-42, Compilation of Air Pollution Emission Factors, Volume I: Stationary Point and Area Sources; Fifth Edition, multiplied by 8760 hours/year and dividing by 2000 lbs/ton.

ii. multiplying the maximum annual DDGS production rate of 488,000 tons/year by the HAPs emission factors specified in the application for this permit or emissions factors determined from testing performed on Stack S10.

Compliance shall be based upon the record keeping requirements in d)(9) and then by calculating the emissions rate for each individual HAP, and dividing by 2,000 pounds/ton.

The emissions for the combined HAPs are determined by summing the emissions rate calculated above for each individual HAP.

f. Emissions Limitation:

Emissions from Stack S10 serving these emissions units shall not exceed:

102.48 tons of CO per rolling 12-month period;

111.51 tons of SO2 per rolling 12-month period;

16.10 tons of PE and PM_{10} per rolling 12-month period; and

8.76 tons of VOC per rolling 12-month period.

Applicable Compliance Method:

Compliance with the rolling 12-month limitation for each pollutant shall be based upon record keeping requirements in d)(9) and shall be calculated by multiplying the monthly 190 proof ethanol production rate by the following emission factors identified and determined in b)(2)h., or the emissions factor determined from

performance testing described in the testing requirements for emissions units B001 and B002, and dividing by 2,000 lbs/ton:

CO: 1.12 lb/1,000 gallons of 190 proof ethanol

SO2: 1.22 lb/1,000 gallons of 1990 proof ethanol

PE/PM_{10}: 0.18 lb/1,000 gallons of 190 proof ethanol

VOC: 0.08 lb/1,000 gallons of 190 proof ethanol

g) Miscellaneous Requirements

(1) None.

15. Emissions Unit Group -Ethanol Storage Tanks: T001,T002,T004,T005,T006

EU ID	Operations, Property and/or Equipment Description
T001	200,000 gallon Above Ground Internal Floating Roof Storage Tank (190 Proof Ethanol Tank)
T002	200,000 gallon Above Ground Internal Floating Roof Storage Tank (200 Proof Ethanol Tank)
T004	1,500,000 gallon Above Ground Internal Floating Roof Storage Tank (Denatured Ethanol Tank No. 1)
T005	1,500,000 gallon Above Ground Internal Floating Roof Storage Tank (Denatured Ethanol Tank No. 2)
T006	1,500,000 gallon Above Ground Internal Floating Roof Storage Tank (Denatured Ethanol Tank No. 3)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Volatile organic compound (VOC) emissions from emissions unit T001 shall not exceed 0.19 lb/hour and 0.83 ton per year. VOC emissions from emissions unit T002 shall not exceed 0.14 lb/hour and 0.61 ton per year. Combined VOC emissions from emissions units T004, T005 and T006 shall not exceed 0.22 lb/hour and 0.96 ton per year. See b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-21-09(L)	This rule is not applicable because these tanks do not store petroleum liquids as defined in OAC rule 3745-21-01(E)(13).
d.	40 CFR Part 60, Subpart Kb	See d)(2).

(2) Additional Terms and Conditions

a. The potential emissions are based are based on the annual production of 154,000,000 gallons of denatured ethanol.

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from these emissions units since the potential to emit for VOC is less than 10 tons/year.

d. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01.

c) Operational Restrictions

(1) This above-ground storage tanks shall only be used to store the following:

a. For emissions unit T001, 190 proof ethanol.

b. For emissions unit T002, 200 proof ethanol.

c. For emissions units T004, T005 and T006, denatured ethanol (ethanol and up to 5% gasoline).

(2) The annual undenatured ethanol throughput for emissions unit T001 shall not exceed 219,000,000 gallons of 190 proof undenatured ethanol.

(3) The annual undenatured ethanol throughput for emissions unit T002 shall not exceed 146,666,667 gallons of 200 proof undenatured ethanol.

(4) The annual combined denatured ethanol throughput for emissions units T004, T005 and T006 shall not exceed 154,000,000 gallons of denatured ethanol.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information:

a. the undenatured ethanol throughput for emissions unit T001 for each month, in gallons;

b. the undenatured ethanol throughput for emissions unit T002 for each month, in gallons;

c. the combined denatured ethanol throughput for emissions units T004, T005 and T006 for each month, in gallons.

d. the annual undenatured ethanol throughput for emissions unit T001 [sum of the monthly values recorded for d)(1)a.], in gallons;

e. the annual undenatured ethanol throughput for emissions unit T002 [sum of the monthly values recorded for d)(1)b.], in gallons; and

f. the annual combined denatured ethanol throughput for emissions units T004, T005 and T006 [sum of the monthly values recorded for d)(1)c.], in gallons.

(2) The permittee shall keep the following records per 40 CFR Part 60, Subpart Kb:

a. the dimension of the storage vessel and an analysis showing the capacity of the storage vessel, kept for the life of the source; and

b. a record of the volatile organic liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period, kept for at least 2 years.

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all exceedances of the limitation of the undenatured ethanol throughput for emissions unit T001;

ii. all exceedances of the limitation of the undenatured ethanol throughput for emissions unit T002; and

iii. all exceedances of the combined denatured ethanol throughput for emissions units T004, T005 and T006.

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports which specify the total VOC, single HAP and combined HAPs emissions from these emissions units for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

VOC emissions from emissions unit T001 shall not exceed 0.19 lb/hour and 0.83 ton per year.

<u>Applicable Compliance Method:</u>

The annual VOC emissions limitation is based on the annual undenatured ethanol throughput for T001 and the annual emissions calculated using USEPA's Tanks 4.09d software. The hourly VOC emissions limitation was determined by multiplying the annual emissions by 2000 lbs/ton and dividing by 8760 hours/year.

Compliance with these emissions limitations is based on compliance with the undenatured ethanol throughput limitation for emissions unit T001.

b. <u>Emission Limitation:</u>

VOC emissions from emissions unit T002 shall not exceed 0.14 lb/hour and 0.61 ton per year.

Applicable Compliance Method:

The annual VOC emissions limitation is based on the annual undenatured ethanol throughput for T002 and the annual emissions calculated using USEPA's Tanks 4.09d software. The hourly VOC emissions limitation was determined by multiplying the annual emissions by 2000 lbs/ton and dividing by 8760 hours/year.

Compliance with these emissions limitations is based on compliance with the undenatured ethanol throughput limitation for emissions unit T002.

c. Emission Limitation:

Combined VOC emissions from emissions units T004, T005 and T006 shall not exceed 0.22 lb/hour and 0.96 ton per year.

Applicable Compliance Method:

The annual VOC emissions limitation is based on the annual combined denatured ethanol throughput for T004, T006 and T006, and the annual emissions calculated using USEPA's Tanks 4.09d software. The hourly VOC emissions limitation was determined by multiplying the annual emissions by 2000 lbs/ton and dividing by 8760 hours/year.

Compliance with these emissions limitation is based on compliance with the annual combined denatured ethanol throughput limitation for emissions units T004, T005 and T006.

g) Miscellaneous Requirements

(1) None.

16. Emissions Unit Group -Grain Hammermills: P001,P002,P003,P004

EU ID	Operations, Property and/or Equipment Description
P001	Grain Hammermill No. 1 Controlled with a Baghouse
P002	Grain Hammermill No. 2 Controlled with a Baghouse
P003	Grain Hammermill No. 3 Controlled with a Baghouse
P004	Grain Hammermill No. 4 Controlled with a Baghouse

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) b)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Particulate emissions (PE) and emissions of particulate matter less than 10 microns in diameter (PM_{10}) from P001 and P002 combined shall not exceed 0.56 lb/hr and 2.44 tons per year. PE and emissions PM_{10} from P003 and P004 combined shall not exceed 0.56 lb/hr and 2.44 tons per year. See b)(2)a., b)(2)c. and c)(1).
b.	OAC rule 3745-31-05(A)(3)b, as effective 12/01/06	See b)(2)d.
c.	OAC rule 3745-17-07(A)	Visible PE from the stacks serving these emissions units shall not exceed 20% opacity, as a 6-minute average, except as specified by rule.
d.	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3), as effective 11/30/01.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Pursuant Figure II of this rule, the PE from each emissions unit shall not exceed 1.75 lbs/hr. See b)(2)e.

(2) Additional Terms and Conditions

a. Each emissions unit is controlled by a separate baghouse. The baghouses for emissions units P001 and P002 are vented through a common stack identified as Stack S30-1. The baghouses for emissions units P003 and P004 are vented through common stack identified as Stack S30-2. The outlet concentration limitation 0.005 gr PE/dscf specified in b)(2)d. below applies to each baghouse stack.

b. The annual allowable emission rates are based on the annual milled grain throughput of 1,596,000 tons per year for each emissions unit, and operating each emissions unit and its associated baghouse 8760 hours per year.

c. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment), as voluntary restrictions proposed by the permittee, for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

i. These emissions units shall be vented to a baghouse, whenever the air contaminant source is in operation, with an outlet particulate emissions concentration not to exceed of 0.005 gr/dscf.

ii. PE and PM_{10} emissions from each of these emissions units shall not exceed 1.22 tons per rolling 12-month period.

e. This rule paragraph and emissions limitations apply once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

f. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

c) Operational Restrictions

(1) Emissions from these emissions units shall vented to a baghouse, whenever the air contaminant source is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.25 to 8 inches of water (manufacturer's specifications).

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(3) 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 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.

(4) The permittee shall maintain monthly records of the following information:

a. the operating hours for emissions units P001, P002, P003 and P004;

b. the PE and PM_{10} emissions from emissions units P001, P002, P003 and P004, in tons; and

c. the rolling, 12-month summation of PE and PM_{10} emissions from emissions units P002, P003, P004 and P005, in tons.

e) Reporting Requirements

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

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

ii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse; and

iii. all exceedances of the rolling, 12-month PE and PM_{10} emissions limitations for emissions units P001, P002, P003 and P004.

b. Identification of the following information in accordance with the monitoring requirements for visible emissions in d)(3) above:

i. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

ii. any corrective actions taken to minimize or eliminate the visible particulate emissions.

c. the probable cause of each deviation (excursion);

d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

e. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit annual reports which specify the total PE and PM_{10} emissions from emissions units P001, P002, P003 and P004 for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

PE and emissions of PM_{10} from P001 and P002 combined shall not exceed 0.56 lb/hr.

PE and emissions PM_{10} from P003 and P004 combined shall not exceed 0.56 lb/hr.

<u>Applicable Compliance Method:</u>

Compliance shall be determined using the baghouse exhaust grain loading and inputs representing the Potential to Emit (PTE), as follows:

Combined Hourly Emissions = (exhaust PE concentration) * (combined exhaust air flow rate for two baghouses) * (60 minutes/hr) / (7000 grains/lb)

Combined Hourly Emissions = (0.005 gr/dscf of PE) * (6,495 scfm + 6,495 scfm) * (60 minutes/hr) / (7000 grains/lb)

PM_{10} emissions from the baghouses are assumed to be equal to PE from the baghouses. Compliance with the allowable PM_{10} baghouse exhaust concentration is assumed with compliance of the PE baghouse exhaust concentration.

Compliance with the baghouse outlet PE concentration shall be determined through the performance testing as described in f)(2).

b. Emission Limitation:

PE and emissions PM_{10} from P001 and P002 combined shall not exceed 2.44 tons per year.

PE and emissions PM_{10} from P003 and P004 combined shall not exceed 2.44 tons per year.

Applicable Compliance Method:

Compliance shall be determined using the baghouse exhaust grain loading and inputs representing the Potential to Emit (PTE), as follows:

Combined Annual Emissions = (combined hourly PE emissions rate) * (8760 hours/year) / (2000 lbs/ton)

PM_{10} emissions from the baghouses are assumed to be equal to PE from the baghouses. Compliance with this emission is achieved by complying with the baghouse outlet PE concentration limitation and the combined hourly emissions rate.

c. Emission Limitation:

PE and PM_{10} emissions from each of these emissions units shall not exceed 1.22 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in d)(4) and shall be calculated as follows:

Emissions = (exhaust PE concentration) * (exhaust air flow rate) * (60 minutes/hr) * (annual operating hours) / (7000 grains/lb) / (2000 lbs/ton)

Emissions = (PE in gr/dscf from most recent test) * (6,495 scfm) * (60 minutes/hr) * (annual operating hours) / (7000 grains/lb) / (2000 lbs/ton)

The baghouse outlet PE concentration shall be determined through the performance testing as described in f)(2).

PM_{10} emissions from the baghouse are assumed to be equal to PE from the baghouse. Compliance with the allowable PM_{10} baghouse exhaust concentration is assumed with compliance of the PE baghouse exhaust concentration.

d. Emission Limitation:

PE from each emissions unit shall not exceed 1.75 lbs/hr.

Applicable Compliance Method:

Compliance with this hourly limitation shall be determined through the performance testing as described in f)(2).

e. Emission Limitation:

The baghouse outlet particulate emissions concentration shall not exceed 0.005 gr/dscf.

Applicable Compliance Method:

Compliance with the baghouse outlet PE concentration shall be determined through the performance testing as described in f)(2).

f. Emission Limitation:

Visible PE from the stacks serving these emissions units shall not exceed 20% opacity, as a 6-minute average, except as specified by 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).

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

a. The emissions testing shall be conducted between May 1, 2014 and September 30, 2014. Future testing will be required as needed and determined by Ohio EPA District Office or local air agency, and will be addressed in the Title V permit to be issued.

b. The emission testing shall be conducted to:

i. demonstrate compliance with the outlet concentration limitation of 0.005 gr PE/dscf; and

ii. demonstrate compliance with the allowable emissions rate of 1.75 lbs/hr.

Note, each emissions unit is controlled by a separate baghouse. The baghouses for emissions units P001 and P002 are vented through a common stack. The baghouses for emissions units P003 and P004 are vented through a different separate common stack. The outlet PE concentration limitation of 0.005 gr/dscf applies to each stack. The lb/hour emissions rate for each emissions unit shall be determined by dividing the emissions rate measured at the common stack associated with each emissions unit by two.

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

i. Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content; and

ii. Method 5 of 40 CFR Part 60, Appendix A for filterable PE.

Alternative U.S. EPA approved test methods may be used with prior approval from the Regional Air Pollution Control 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 appropriate Ohio EPA District Office or local air agency.

e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

17. Emissions Unit Group -RTO/Waste Heat Recovery Boilers: B001, B002

EU ID	Operations, Property and/or Equipment Description
B001	145 mmBtu/hr Natural Gas-fired Recuperative Thermal Oxidizer / Waste Heat Recovery Boiler
B002	145 mmBtu/hr Natural Gas-fired Recuperative Thermal Oxidizer / Waste Heat Recovery Boiler

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) b)(1)e.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Emissions from Stack S10 serving these emissions units shall not exceed 2.00 lb VOC/hour and 8.76 tons per rolling 12 month period. See b)(2)a. and b)(2)i.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)j.
c.	ORC 3704.03(T)	Emissions from Stack S10 serving these emissions units shall not exceed: Nitrogen oxides (NO_X) emissions shall not exceed 49 lb/hour, as a 30-day rolling average at all times, including periods of startup, shutdown and malfunction; Carbon monoxide (CO) emissions shall not exceed 28.08 lb/hour; Sulfur dioxide (SO_2) emissions shall not exceed 30.55 lb/hour; and

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Particulate emissions (PE) and emissions of particulate matter less than 10 microns in diameter (PM_{10}) shall not exceed 4.41 lb/hour. Visible PE from the stack serving these emissions units shall not exceed 10% opacity, as a six-minute average. See b)(2)a., b)(2)b., and b)(2)h.
d.	OAC rule 3745-31-05(D) (synthetic minor to avoid PSD for NO_x) and (Synthetic minor to establish potential to emit.)	Emissions from Stack S10 serving these emissions units shall not exceed: 214.62 tons of NO_X per rolling 12-month period; 3.86 tons of single HAP per rolling 12-month period and; 7.79 tons of combined HAPS per rolling 12-month period. See b)(2)c, and c)(1). See B.2. and B.3 in Section B. Facility-Wide Terms and Conditions.
e.	OAC rule 3745-17-07(A)(1) and OAC rule 3745-17-10(B)(1)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to ORC 3704.03(T).
f.	OAC rule 3745-18-06	These emissions units are exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
g.	ORC 3704.03(F) and OAC rule 3745-114-01	See d)(10), d)(11) and e)(4).
h.	40 CFR 60 Subpart Db	NOx emissions from emissions unit B001 and B002 shall not exceed 0.10 lb/mmBtu of actual heat input as a 30-day rolling average at all times, including periods of startup, shutdown and malfunction. See b)(2)f.

(2) Additional Terms and Conditions

a. Emissions from P005, P007, P008, P009, P010, P011, P013 (except emissions vented to the Stack S60 flare) and P902 (except emissions vented to Stack S70)

are vented through and controlled by thermal oxidizer/waste heat recovery boilers emissions units B001 and B002, which in turn vent to a common stack identified as Stack S10. The emissions limitations and other requirements for the Stack S10 are accounted for and included in the permit terms and conditions for emissions units B001 and B002, P005 and P007, and P008 through P011.

b. Best available technology (BAT) control requirements for these emissions units has been determined the following in addition to those specified above:

   i. the use of low NO_X burners in B001, B002;

   ii. emissions from emissions units P005 , P007, P008, P009, P010, P011, P013 and P902 shall be vented to these emissions units, B001 and B002, to control emissions.

   iii. Maintain enclosures and vent all the emissions to the thermal oxidizers to ensure compliance.

   BAT also includes compliance with the terms and conditions of this permit. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. The following restrictions limit the potential to emit for CO, NOx, SO2, VOC, PE, PM10, and HAPs under OAC rule 3745-31-05 (D) and avoid Prevention of Significant Deterioration (PSD) for NOx under OAC rule 3745-31-05 (D):

   i. The amount of dried distillers grain soluble (DDGS) production from P008 through P011 shall not exceed 488,000 tons per rolling 12 month period.

   ii. The amount of 190 proof ethanol production shall not exceed 219,000,000 gallons per rolling 12 month period.

   iii. Emissions units, B001 and B002, shall be operated and achieve a minimum VOC destruction efficiency of 98% for controlling the VOC emissions vented to them from emissions units P005, P007, P008, P009, P010, P011, P013 and P902.

   iv. Emissions units, B001 and B002, shall be operated and achieve a minimum CO destruction efficiency of 90% for controlling the CO emissions vented to them from emissions units P005, P007, P008, P009, P010, P011, P013 and P902.

   v. Emissions units B001 and B002 shall be operated and achieve a minimum CO destruction efficiency of 90% for controlling the CO emissions vented to them from emissions units P005, P007, P008, P009, P010, P011, P013 and P902.

d. Based upon the 12-month production limitation of 488,0000 tons of dried distillers grain solubles (DDGS), and the 12-month production limitation of 219,000,000

gallons of 190 proof ethanol production, the potential to emit for Stack S10 serving these emissions units are

i. 214.62 tons of NO_x per rolling 12-month period;

ii. 102.48 tons of CO per rolling 12-month period;

iii. 111.51 tons of SO_2 per rolling 12-month period;

iv. 16.10 tons of PE and PM_{10} per rolling 12-month period;

v. 8.76 tons of VOC per rolling 12-month period;

vi. 3.86 tons of single HAP per rolling 12-month period; and

vii. 7.79 tons of combined HAPs per rolling 12-month period.

e. This emissions unit is permitted at its potential to emit, as defined in OAC rule 3745-31-01, for all pollutants.

f. The permittee shall maintain a written quality assurance/quality control plan for the continuous NO_X monitoring system, designed to ensure continuous valid and representative readings of NO_X emissions in units of the applicable standards (lbs/mmBtu of actual heat input). The plan shall follow the requirements of Appendix F - Quality Assurance Procedures of 40 CFR Part 60 - Standards of Performance for New Stationary Sources. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_X monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

g. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

h. The maximum annual DDGS production for the plant is 488,000 tons per year which corresponds to an annual production of 154,000,000 gallons of denatured ethanol and an annual production of 219,000,000 gallons of 190 proof ethanol for the plant.

The VOC lb/hr is based on a VOC emission rate of 0.08 lb VOC/1,000 gallons of 190 proof ethanol derived as follows:

VOC emission rate = (219,000,000 gallons/year) / (8760 hr/year) * 0.08 lb/1000 gallons = 2.00 lb/hour

The lb/hr limits for CO, SO2, and PE/PM10 are based upon lb/ton-DDGS emission factors specified in the application for this PTI and correlate the lb/1000 gallon 1990 proof emissions rates as follows:

Maximum annual 190 proof ethanol production = 219,000,000 gallons/year (corresponds to 146,666,667 gallons of 200 proof)

Hourly average 190 proof ethanol production = (219,000,000 gallons/year) / (8760 hours/year) = 25,000 gallons/hr

CO average emission rate = (28.08 lb CO/hr) / (25,000 gallons/hr) = 1.12 lb CO/1,000 gallons of 190 proof ethanol

SO_2 average emission rate = (30.55 lb SO_2/hr) / (25,000 gallons/hr) = 1.22 lb SO_2/1,000 gallons of 190 proof ethanol

PE and PM_{10} average emission rate = (4.41 lb PE and PM_{10}/hr) / (25,000 gallons/hr) = 0.18 lb PE and PM_{10} /1,000 gallons of 190 proof ethanol

i. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

j. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0110097 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for VOC emissions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

i. emissions from emissions units P005, P007, P008, P009, P010, P011, P013 and P902 shall be vented to these emissions units, B001 and B002, to control emissions.

ii. maintain enclosures and vent all the emissions to the thermal oxidizer to ensure compliance;

iii. the amount of 190 proof ethanol production shall not exceed 219,000,000 gallons per rolling 12 month period; and

iv. emissions units B001 and B002 shall be operated and achieve a minimum VOC destruction efficiency of 98% for controlling the VOC emissions vented to them from emissions units P005, P007, P008, P009, P010, P011, P013 and P902.

c) Operational Restrictions

(1) The annual production of dried distillers grain solubles (DDGS) production from P008 through P011 shall not exceed 488,000 tons per rolling 12-month period (corresponding to a rolling 12-month production of 154,000,000 gallons of denatured alcohol).

(2) The annual production of 190 proof ethanol production shall not exceed 219,000,000 gallons per rolling 12 month period.

(3) The maximum combined total heat input to emissions units B001, B002 and P008 through P011 shall not exceed 490 mmBtu/hr.

(4) The permittee shall burn only natural gas in these emissions units.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas or biomethanator off-gasses from emissions unit P013, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(2) The permittee shall maintain a daily record of the type and quantity of fuel burned in B001 and B002 and the hourly average heat input (expressed in mmBtu/hr).

(3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizers, B001 and B002, for each 3-hour block of time when any emissions unit controlled by a thermal oxidizer is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance. The minimum combustion temperature is subject to revision if acceptable emissions testing is conducted that demonstrates the emission units and the control device is in compliance at a different combustion temperature.

A “3-hour block of time” is defined as a successive, non-overlapping 3-hour block of time.

(4) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation, including periods of startup and shutdown. 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 record the following information each day the emissions unit is in operation:

a. each 3-hour block of time [as defined in d)(3)], when any emissions unit controlled by the thermal oxidizer was in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

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

(5) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(6) 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 Stack S-10 serving these emissions units. 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.

(7) The permittee shall maintain on site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous NO_X monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

(8) The permittee shall operate and maintain equipment to continuously monitor and record NO_X emissions from these emissions units in units of the applicable standards (lbs/hour and lbs/mmBtu of actual heat input). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

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

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

b. emissions of NO_X in pounds per hour and in all units of the applicable standards (lbs/mmBtu of actual heat input) in the appropriate averaging periods (30-day rolling average) and lbs/MMBtu of actual heat input on a 30 day rolling average (each day ends a 30 day period);

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. the total NO_X emissions for the month;

g. hours of operation of the emissions unit and the continuous NO_X monitoring system;

h. the date, time, and hours of operation of the emissions unit without the continuous NO_X monitoring system;

i. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous NO_X monitoring system; as well as,

j. the reason (if known) and the corrective actions taken (if any) for each such event in d)(7)h and d)(7)i. The permittee shall maintain monthly records of the following information:

k. The daily records required for emissions units B001 and B002 by 40 CFR 60 Subpart Db Subsection 60.49b(g), including the average hourly NOx emission rate and the 30-day average NOx emission rate expressed in lb/mmBtu heat input.

The daily average hourly NOx emission rates for B001 and B002 shall be calculated using the following equation:

$$NO_x\ ER_{B001\ \&\ B002} = (NO_x\ ER_{Stack\ S10} - NO_x\ ER_{P008\text{-}P011})/\text{Heat Input}_{B001\ \&\ B002}$$

Where:

$NO_x\ ER_{B001\ \&\ B002}$ = the average hourly NO_x emission rate (lb/mmBtu) for B001 and B002;

$NO_x\ ER_{Stack\ S10}$ = the average hourly NO_x emission rate (lb/hr) measured by the Stack S10 CEMS;

NO_x $ER_{P008-P011}$ = the average hourly NO_x emission rate (lb/hr) for Dryers P008 - P011 determined by multiplying the average hourly natural gas usage in P008 - P011 by the emissions factor for $NO_x$from USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4 Table 1.4-1 (7/98)]; and

Heat $Input_{B001\ \&\ B002}$ = the average hourly total heat input (mmBtu/hr) to B001 and B002

The 30-day average NO_x emission rates for B001 and B002 shall be calculated using the following equation:

NO_x $ER_{B001\&B002}$ = Sum of the Daily Average Hourly NO_x Emission Rates for the Most Recent 30-day period/30

(9) The permittee shall maintain monthly records of the following information:

a. The operating hours;

b. the DDGS production rate, in tons;

c. production of 190 proof ethanol, in gallons;

d. the rolling, 12-month summation of the DDGS production, in tons;

e. the rolling, 12-month summation of the production of 190 proof ethanol, in gallons;

f. the NO_x, CO, SO_2, PE, PM_{10}, VOC, single HAP and combined HAP emissions from Stack S10, in tons; and

g. the rolling, 12-month summation of NO_X, CO, SO_2, PE, PM_{10}, VOC, single HAP and combined HAP emissions from Stack S10, in tons.

(10) The permit to install (PTI) for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system (via stack S10), as specified by the permittee in the PTI 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 PTI 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 (mg/m^3): 33.20
Maximum Hourly Emission Rate (lbs/hr): 0.37
Predicted 1-Hour Maximum Ground-Level Concentration ($\mu g/m^3$): 56.61
MAGLC ($\mu g/m^3$): 790.36

Pollutant: Formaldehyde
TLV (mg/m^3): 0.27
Maximum Hourly Emission Rate (lbs/hr): 0.45
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 4.73
MAGLC (µg/m^3): 6.47

Pollutant: Hexane
TLV (mg/m3): 176.23
Maximum Hourly Emission Rate (lbs/hr): 0.88
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 134.64
MAGLC (µg/m3): 4,196.12

(11) The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(b), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. 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.).

e) 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 Regional Air Pollution Control Agency within 30 days after the deviation occurs.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each 3-hour block of time [as defined in d)(2)] (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;

ii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer;

iii. all exceedances of the rolling, 12-month summation of the DDGS production limitation;

iv. all exceedances of the rolling, 12-month summation of the 190 proof ethanol production;

v. all exceedances of the rolling, 12-month NO_X, CO, SO_2, PE, PM_{10}, VOC, single HAP and combined HAP emissions limitation for emissions from Stack S10; and

vi. any day during which any visible particulate emissions not representative of normal operations were observed from Stack S-10 serving these emissions units (in accordance with the monitoring requirements for visible emissions in d)(6) above).

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_X monitoring system in Stack S10 serving these emission units:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_X emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations

(i.e., lbs/hr as a 30-day rolling average, and lbs/mmBtu of actual heat input as a 30-day rolling average). The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standards (i.e., lbs/mmBtu of actual heat input as a 30-day rolling average).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NO_X and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

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

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

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

viii. results and dates of quarterly cylinder gas audits;

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

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_X monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction** of the continuous NO_X monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime** of the continuous NO_X monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(3)b.xi and e)(3)b.xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

(4) The permittee shall submit annual reports that describe any changes to this emissions unit which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year.

(5) The permittee shall submit annual reports which specify the total NOx, SO2, PE, PM10, VOC, single HAP and combined HAPs emissions in tons per rolling 12-month period from Stack S-10 for the previous calendar year. This report is due by January 31st of each year and shall cover the previous calendar year.

(6) The permittee shall submit annual reports which specify the total NO_X, CO, SO_2, PE, PM_{10}, VOC, single HAP and combined HAPs emissions from these emissions units for the calendar year. This report shall be submitted by April 15 of each year. This requirement may be satisfied by including and identifying the specific emission data from these emissions units in the annual Fee Emissions Report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

NO_x emissions from B001 and B002 shall not exceed 0.10 lb/mmBtu of actual heat input as a 30-day rolling average at all times, including periods of startup, shutdown and malfunction.

<u>Applicable Compliance Method</u>

Compliance shall be demonstrated through the data collected as required in d)(7) and based upon the recordkeeping requirements in d)(8) and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

b. <u>Emissions Limitation:</u>

NO_X emissions from Stack S10 serving these emissions units shall not exceed 49 lb/hour as a 30-day rolling average at all times, including periods of startup, shutdown and malfunction.

Applicable Compliance Method:

The hourly NOx emissions limitation was determined using the 0.10 lb/mmBtu emissions factor for NOx from USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4 Table 1.4-1 (7/98) and multiplying by the maximum of 490 mmBTU/hr heat input for B001, B002 and P008 through P011.

Compliance shall be demonstrated based upon the recordkeeping requirements in d)(8)b. through the data collected as required in 2)(b)f. and d)(7), and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

c. Emissions Limitation:

Emissions from Stack S10 serving these emissions units shall not exceed:

CO emissions shall not exceed 28.08 lb/hour;

VOC emissions shall not exceed 2.00 lb/hour;

SO_2 emissions shall not exceed 30.55 lb/hour; and

PE and PM_{10} shall not exceed 4.41 lb/hour.

Applicable Compliance Method:

Compliance shall be demonstrated through performance testing as described in f)(2).

d. Emissions Limitation:

Visible PE from the stack serving these emissions units shall not exceed 10% opacity, as a six-minute average.

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).

e. Emissions Limitation:

Emissions from Stack S10 serving these emissions units shall not exceed:

214.62 tons of NO_X per rolling 12-month period.

Applicable Compliance Method:

The annual NO_x emissions limitation was determined by multiplying the hourly emissions limitation by 8760 hours/year and dividing by 2000 lbs/ton.

Compliance shall be based upon the record keeping requirements in d)(8) and shall be based on the data collected as required in d)(7) and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

f. Emissions Limitation:

Emissions from Stack S10 serving these emissions units shall not exceed:

102.48 tons of CO per rolling 12-month period;

111.51 tons of SO2 per rolling 12-month period;

16.10 tons of PE and PM_{10} per rolling 12-month period; and

8.76 tons of VOC per rolling 12-month period.

Applicable Compliance Method:

Compliance with the rolling 12-month limitation for each pollutant shall be based upon record keeping requirements in d)(9) and shall be calculated by multiplying the monthly 190 proof ethanol production rate by the following emission factors identified and determined in b)(2)h., or the emissions factor determined from performance testing described in the testing requirements for emissions units B001 and B002, and dividing by 2,000 lbs/ton:

CO: 1.12 lb/1,000 gallons of 190 proof ethanol

SO2: 1.22 lb/1,000 gallons of 190 proof ethanol

PE/PM10: 0.18 lb/1,000 gallons of 190 proof ethanol

VOC: 0.08 lb/1,000 gallons of 190 proof ethanol

g. Emissions Limitation:

Emissions from Stack S10 serving these emissions units shall not exceed:

3.86 tons of single HAP per rolling 12-month period; and

7.79 tons of combined HAPs per rolling 12-month period.

Applicable Compliance Method:

The individual single HAP emissions are determined by the combination of the following:

i. multiplying the maximum total heat input rate for emissions units B001-B002 and P008 – P011 (i.e., 490 mmBTU/hr) by emission factors for combustion of natural gas from Tables 1.4-3 and 1.4-4 (7/98) of AP-42, Compilation of Air Pollution Emission Factors, Volume I: Stationary Point

and Area Sources; Fifth Edition, multiplied by 8760 hours/year and dividing by 2000 lbs/ton; and

ii. multiplying the maximum annual DDGS production rate of 488,000 tons/year by the HAPs emission factors specified in the application for this permit or emissions factors determined from testing on Stack S10.

Compliance shall be based upon the record keeping requirements in d)(9) and the by calculating the emissions rate for each individual HAP and dividing by 2,000 pounds/ton.

The emissions for the combined HAPs are determined by summing the emissions rate calculated above for each individual HAP.

(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 between May 1, 2014 and September 30, 2014. Future testing will be required as needed and determined by Ohio EPA District Office or local air agency, and will be addressed in the Title V permit to be issued.

b. The emission testing shall be conducted to:

i. demonstrate compliance with the following allowable emissions rates for Stack S10, representing the combined emissions from B001, B002, P005, P007, P008, P009, P010, P011, P013 (except emissions vented to the flare) and P902 (except emissions vented to Stack S70):

(a) CO emissions shall not exceed 28.08 lb/hour;

(b) VOC emissions shall not exceed 2.00 lb/hour;

(c) SO2 emissions shall not exceed 30.55 lb/hour; and

(d) PE and PM_{10} shall not exceed 4.41 lb/hour.

ii. validate the following VOC, CO, SO2 and PE/PM10 emissions rates identified and determined in b)(2)h.:

(a) VOC: 0.08 lb/1,000 gallons of 190 proof ethanol;

(b) CO: 1.12 lb/1,000 gallons of 190 proof ethanol;

(c) SO2: 1.22 lb/1,000 gallons of 190 proof ethanol; and

(d) PE/PM10: 0.18 lb/1,000 gallons of 190 proof ethanol

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

i. Methods 1 through 4 from 40 CFR Part 60, Appendix A for velocity traverses, velocity and volumetric flow rates, gas analysis, and moisture content;

ii. Method 5 of 40 CFR Part 60, Appendix A for filterable PE;

iii. Method 202 as set forth in the most recent update of 40 CFR Part 51 Appendix M for PM_{10} and condensable PE;

iv. Method 6C or 320 from 40 CFR Part 60, Appendix A for SO_2;

v. Method 10 or 320 from 40 CFR Part 60, Appendix A for CO;

vi. Method 25 or Method 25A from 40 CFR Part 60, Appendix A for VOC control efficiency.

Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 in 40 CFR Part 63, appendix A of this part may be used with approval of US EPA and the appropriate Ohio EPA District office or local air agency.

* With prior approval from the Ohio EPA and/or the Regional Air Pollution Control Agency, the permittee may perform pre-screening to determine which VOC and HAPs should be tested.

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 appropriate Ohio EPA District Office or local air agency.

e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.