Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

Certified Mail

8/25/2011

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

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0819750245
Permit Number: P0108289
Permit Type: OAC Chapter 3745-31 Modification
County: Darke

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

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
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Regional Air Pollution Control Agency at (937)225-4435or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPCWeb page,www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern

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

Cc: RAPCA

Ohio | Environmental Protection Agency

FINAL

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

Facility ID:	0819750245
Permit Number:	P0108289
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	8/25/2011
Effective:	8/25/2011
Expiration:	4/29/2014

Ohio | Environmental Protection Agency

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

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Authorization

Facility ID: 0819750245
Application Number(s): A0041887
Permit Number: P0108289
Permit Description: Chapter 31 Modification to allow for simultaneous operation of CO2 and purge scrubbers, adjust the compliant pressure drop value, and allow for other bisulfate containing chemicals in the CO2 scrubber.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: $1,250.00
Issue Date: 8/25/2011
Effective Date: 8/25/2011
Expiration Date: 4/29/2014
Permit Evaluation Report (PER) Annual Date: Apr 1 - Mar 31, Due May 15

This document constitutes issuance to:

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

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

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

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

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s))listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0108289
Permit Description: Chapter 31 Modification to allow for simultaneous operation of CO2 and purge scrubbers, adjust the compliant pressure drop value, and allow for other bisulfate containing chemicals in the CO2 scrubber.

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

Emissions Unit ID:	**P006**
Company Equipment ID:	Fermentation Units
Superseded Permit Number:	P0107500
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

  You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement.Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is takenby Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Regional Air Pollution Control Agency in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting[1] a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

[1]Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile 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).

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

   a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

      (1) None.

   b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

      (1) None.

C. Emissions Unit Terms and Conditions

1. P006, Fermentation Units

Operations, Property and/or Equipment Description:

Fermentation and Beer Well controlled with a Scrubber

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. b)(1)i, d)(9), d)(10) and e)(4).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)c, b)(1)d, c)(1), d)(8), e)(1), e)(3), f)(1)c, f)(1)e, f)(1)g and f)(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) (P0108289)	Volatile organic compound (VOC) emissions from Stack S-40 (CO_2 Scrubber Stack) shall not exceed 8.75 lbs/hr, as an 8-hour average. VOC emissions from Stack S-41 (Purge Scrubber Stack) shall not exceed 8.75 lbs/hr. See b)(2)i. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subpart VV.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Particulate emissions (PE) shall not exceed 0.15 lb/hr.

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 0.08 lb/hr. See b)(2)f.
c.	OAC rule 3745-31-05(D) (synthetic minor to avoid TV)	VOC emissions shall not exceed 38.34 tons per rolling 12-month period. Single HAP emissions shall not exceed 6.13 tons per rolling 12-month period. Combined HAP emissions shall not exceed 6.30 tons per rolling 12-month period.
d.	OAC rule 3745-31-05(D) (synthetic minor to avoid TV) and OAC rule 3745-31-05(E), as effective 12/01/06 (synthetic minor to avoid BAT)	PE shall not exceed 0.66 ton per rolling 12-month period. PM_{10} emissions shall not exceed 0.35 ton per rolling 12-month period. See b)(2)b.
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 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. See b)(2)g.
g.	OAC rule 3745-17-11(B)(1)	PE shall not exceed 66.7 lbs/hr. See b)(2)h.
h.	OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subpart VV	See the requirements for emissions unit P801.
i.	ORC 3704.03(F) and OAC rule 3745-114-01	See d)(9), d)(10) and e)(4).

(2) Additional Terms and Conditions

a. The rolling 12-month allowable emission rates are based on the annual production of 132,000,000 gallons of denatured ethanol.

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.

This Permit to Install and Operate for this air contaminant source takes into account the use of a wet scrubber, whenever this air contaminant source is in operation, with a minimum control efficiency of 98%, by weight for PE and PM_{10} emissions, as a voluntary restriction as proposed by the permittee. This restriction allows the permittee to avoid Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

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

d. 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. a high efficiency wet scrubber (CO_2 scrubber or purge scrubber) to control VOC at 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.

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 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 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)(2)f above. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then this emission limitation no longer applies.

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.

i. This emissions unit has two operating scenarios dependant 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 not in operation, all emissions from this emissions unit are vented to the atmosphere via the CO_2 Scrubber and Stack S-40.

ii. When the dry ice facility is in operation, emissions from this emissions unit are vented to the CO_2 Scrubber, a fraction of which is then diverted to the dry ice facility. The remaining fraction is vented to the atmosphere via Stack S-40. If emissions from 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 S-41 while the remaining emissions will continue to be diverted between Stack S-40 and the dry ice facility.

c) Operational Restrictions

(1) The annual amount of undenatured ethanol produced from this emissions unit shall not exceed 125,710,000 gallons, based upon a rolling, 12-month summation of the undenatured ethanol production.

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 CO_2 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 CO_2 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 CO_2 Scrubber measured during the most recent performance test that demonstrated the emissions unit was in compliance. The current acceptable water flow rate to the CO_2 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 CO_2 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 CO_2 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 CO_2 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 CO_2 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)i.ii (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 scenario b)(2)i.ii (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 CO_2 Scrubber and Purge Scrubber (in inches of water column), the CO_2 Scrubber and Purge Scrubber water flow rates (in gallons per minute), and the rate of sodium bisulfite (or equivalent) addition to the CO_2 Scrubber (in milliliters per minute) during operation of this emissions unit, as appropriate for the operating scenarios in b)(2)i, 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 CO_2 Scrubber on a once per shift basis, as appropriate for the operating scenarios in b)(2)i. 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:

a. a description of the corrective action;

b. the date the corrective action was completed;

c. the date and time the deviation ended;

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

e. the pressure drop(s), scrubber water flow rate(s), and rate of sodium bisulfite (or equivalent) addition to the CO_2 Scrubber readings immediately after the corrective action was implemented; and

f. 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 CO_2 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 CO_2 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 VOC, PE, PM_{10}, single HAP and combined HAP emissions, in tons;

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

g. the rolling, 12-month summation of VOC, PE, PM_{10}, single HAP and combined HAP emissions, in tons.

(9) The permit to install and operate (PTIO) 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 (entire facility)

MAGLC (µg/m^3): 790

Pollutant: Formaldehyde

TLV (mg/m^3): 0.272

Maximum Hourly Emission Rate (lbs/hr): 0.013

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m^3): 5.05 (entire facility)

MAGLC (µg/m^3): 6.47

(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 CO_2 Scrubber, pressure drop across the Purge Scrubber, CO_2 Scrubber water flow rate, Purge Scrubber water flow rate,

or the rate of sodium bisulfite (or equivalent) addition to the CO_2 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 CO_2 Scrubber or Purge Scrubber;

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

iv. allexceedances of the rolling, 12-month VOC, PE, PM_{10}, single HAP and combined HAP 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).

(2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(5) above:

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

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

(3) The permittee shall submit annual reports which specify the total VOC, PE, PM_{10}, single HAP and combined HAP 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 emissions data from these emissions units in the annual Fee Emission Report.

(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) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(6) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing if an equivalent to sodium bisulfite and/or an alternate sodium bisulfite concentration is used. The notification shall include a calculation of the acceptable rate of the equivalent material addition to the CO_2 Scrubber. The notification shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 7 days after the equivalent to sodium bisulfite or alternate sodium bisulfite concentration is used.

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 Stack S-40 (CO_2 Scrubber Stack) shall not exceed 8.75 lbs/hr, as an 8-hour average.

<u>Applicable Compliance Method</u>

Compliance shall be demonstrated through performance testing as described in f)(2).

b. <u>Emission Limitation</u>

VOC emissions from Stack S-41 (Purge Scrubber Stack) shall not exceed 8.75 lbs/hr.

<u>Applicable Compliance Method</u>

Compliance shall be demonstrated through performance testing as described in f)(3).

c. <u>Emission Limitation</u>

VOC emissions shall not exceed 38.34 tons per rolling 12-month period.

<u>Applicable Compliance Method</u>

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

VOC emissions = Stack S-40 (CO_2 Scrubber Stack) VOC emissions + Stack S-41 (Purge Scrubber Stack) VOC emissions

Stack S-40 VOC emissions = (hourly emissions rate from Stack S-40) * (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

Stack S-41 VOC emissions = (hourly emissions rate from Stack S-41) * (annual operating hours for the Purge Scrubber)] / 2,000 pounds/ton

d. Emission Limitation

PE shall not exceed 66.7 lbs/hr [OAC rule 3745-17-11(B)(1)].

PE shall not exceed 0.15 lb/hr [OAC rule 3745-31-05(A)(3) as effective 11/30/01].

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.

e. Emission Limitation

PE shall not exceed 0.66 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/mmgalundenatured ethanol) * (annual undenatured ethanol production, mmgal)] / 2,000 pounds/ton

f. Emission Limitation

PM_{10} shall not exceed 0.08 lb/hr.

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.

g. Emission Limitation

Emissions of PM_{10} shall not exceed 0.35 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}/mmgalundenatured ethanol) * (annual undenatured ethanol production, mmgal)] / 2,000 pounds/ton

h. Emission Limitation

Single HAP emissions shall not exceed 6.13 tons per rolling 12-month period.

Combined HAP emissions 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)(8) and shall be determined by using the following equation:

For each individual HAP,

Individual HAP emissions = Stack S-40 (CO_2 Scrubber Stack) Individual HAP emissions + Stack S-41 (Purge Scrubber Stack) Individual HAP emissions

Stack S-40 Individual HAP emissions = (hourly emissions rate from Stack S-40) * (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

Stack S-41 Individual HAP emissions = (hourly emissions rate from Stack S-41) * (annual operating hours for the Purge Scrubber)] / 2,000 pounds/ton

The hourly emissions rate of each individual HAP from Stacks S-40 and S-41 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.

i. 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. For Stack S-40 (CO_2 Scrubber Stack), the emission testing shall be conducted between the months of May and September calendar year 2013.

b. The emission testing shall be conducted to:

i. demonstrate compliance with the allowable emissions rate for VOC of 8.75 lbs/hr from Stack S-40 (CO_2 Scrubber Stack), as an 8-hour average;

ii. demonstrate compliance with the allowable combined emission rate for single and combined HAPs from Stack S-40 (CO_2 Scrubber Stack); and

iii. verify the control efficiency (98% for VOC) of the CO_2 Scrubber.

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.

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

a. For Stack S-41 (Purge Scrubber Stack), the emission testing shall be conducted within 180 days of initial startup of the Purge Scrubber.

b. The emission testing shall be conducted to:

i. demonstrate compliance with the allowable emissions rate for VOC of 8.75 lbs/hr from Stack S-41 (Purge Scrubber Stack);

ii. demonstrate compliance with the allowable combined emission rate for single and combined HAPs from Stack S-41 (Purge Scrubber Stack); and

iii. verify the control efficiency (98% for VOC) of the Purge Scrubber;

iv. establish the acceptable minimum limit for the water flow rate to the Purge Scrubber 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.