State of Ohio Environmental Protection Agency

STREET ADDRESS:
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50 W. Town St., Suite 700
Columbus, Ohio 43215

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P.O. Box 1049
Columbus, OH 43216-1049

5/18/2009

Certified Mail

Yes	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR
No	CEMS
No	MACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

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

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0819750245
Permit Number: P0104662
Permit Type: OAC Chapter 3745-31 Modification
County: Darke

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, Greenville Daily Advocate. A copy of the public notice and the draft permit are enclosed. This permit has been posted to the Division of Air Pollution Control Web page http://www.epa.state.oh.us/dapc in Microsoft Word and Adobe Acrobat format. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
122 South Front Street
Columbus, Ohio 43215

and

Regional Air Pollution Control Agency
117 South Main Street
Dayton, OH 45422-1280

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install and operate will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install and Operate is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Regional Air Pollution Control Agency at (937)225-4435.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
RAPCA; Indiana

Darke County

PUBLIC NOTICE
Issuance of Draft Air Pollution Permit-To-Install and Operate
Andersons Marathon Ethanol LLC

Issue Date: 5/18/2009
Permit Number: P0104662
Permit Type: OAC Chapter 3745-31 Modification
Permit Description: Increase in the allowable annual hours of operation from 3200 hours per year to 3500 hours per year.
Facility ID: 0819750245
Facility Location: Andersons Marathon Ethanol LLC
5278 SEBRING WARNER RD,
Greenville, OH 45331
Facility Description: All Other Basic Organic Chemical Manufacturing

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio has issued a draft action of an air pollution control, federally enforceable permit-to-install and operate (PTIO) for the facility at the location identified above on the date indicated. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Michael Maleski at Regional Air Pollution Control Agency, 117 South Main Street or (937)225-4435. The permit can be downloaded from the Web page: www.epa.state.oh.us/dapc

Permit Strategy Write-Up

1. Check all that apply:

   _X_ Synthetic Minor Determination

   ___ Netting Determination

2. Source Description:

   The Andersons, Inc., 0819750245, is an ethanol production facility located Darke County. The facility processes corn to manufacture ethanol and distillers grains, which is used as animal feed. Corn is delivered by truck and rail to the facility. It is unloaded and stored in silos. The corn is dried, if necessary, and milled before being processed in the plant. The milled corn is mixed into a slurry and cooked. Afterwards, it is fermented to a slurry containing ethanol. This slurry is further refined through distillation and filtering. The resulting ethanol is denatured with gasoline and stored in tanks. The ethanol product is loaded into railcars or trucks using a loading rack. A byproduct of this process is distillers grains, which is left over from the fermentation process. The grains are dried to various degrees, cooled and sold as animal feed.

3. Facility Emissions and Attainment Status:

   The facility is located in Darke County, which is attainment for all criteria pollutants. Potential uncontrolled facility-wide emissions are presented in Table 1 below.

   Table 1 – Uncontrolled Potential Emissions (tons/yr)

Emissions Unit	PE	PM_{10}	SO_2	NO_X	CO	VOC	Single HAP	Total HAP
B001 - Thermal Oxidizer / Waste Heat Recovery Boiler #1	231.12	231.12	95.74	92.86	882.47	462.25	35.30	100.07
B002 - Thermal Oxidizer / Waste Heat Recovery Boiler #2								
P005 - Mash and Yeast Operations								
P007 - Distillation Process								
P008 - DDGS Dryer #1								
P009 - DDGS Dryer #2								
P010 - DDGS Dryer #3								
P011 - DDGS Dryer #4								
P013 - Methanator Flare (emissions vented to DDGS Dryer)								
P902 - DDGS Handling and Cooling (B001/B002 stack only)								
F002 - Grain Drying	66.25	17.69	0.12	19.71	16.56	1.08	---	---
J001 - Denatured Ethanol Truck and Rail Loadout	0.0033	0.0033	0.0026	3.74	20.13	482.93	---	---
P001 - Grain Hammer #1	78.02	78.02	---	---	---	---	---	---
P002 - Grain Hammer #2								
P003 - Grain Hammer #3								
P004 - Grain Hammer #4								
P006 - Fermentation and Beer Well	33.03	17.44	---	---	---	1917.1	306.60	315.09
P012 - Cooling Tower	13.70	13.70	---	---	---	---	---	---
P013 - Methanator Flare (pilot for flare only)	0.0033	0.0033	0.0026	0.044	0.037	0.0024	---	---
P014 - Emergency Fire water pump	0.015	0.015	0.098	0.86	0.045	0.023	---	---
P901 - Grain Receiving, Handling and Storage (stack only)	201.61	201.61	---	---	---	---	---	---
P902 - DDGS Handling & Cooling (S70 stack only)	64.60	64.60	---	---	---	10.51	0.63	1.20
P903 - DDGS Loadout to Truck and Rail (stack only)	34.16	34.16	---	---	---	---	---	---
P904 - Four Steel Grain Storage Bins	9.75	2.46	---	---	---	---	---	---
T001 - 190 Proof Ethanol Storage Tank	---	---	---	---	---	0.53	---	---
T002 - 200 Proof Ethanol Storage Tank	---	---	---	---	---	0.53	---	---

T003 - Gasoline Denaturant Storage Tank	---	---	---	---	---	1.29	---	---
T004 - Denatured Ethanol Storage Tank #1	---	---	---	---	---	0.30	---	---
T005 - Denatured Ethanol Storage Tank #2	---	---	---	---	---	0.30	---	---
T006 - Denatured Ethanol Storage Tank #3	---	---	---	---	---	0.30	---	---
Total	732.27	660.83	95.96	117.21	919.24	2877.2	342.53	416.36

Note that the highest single HAP is acetaldehyde.

4. Source Emissions:

Potential controlled facility-wide emissions are presented Table 2 in Section 5 below.

5. Conclusion:

Potential controlled facility-wide emissions are presented in Table 2 below:

Table 2 – Controlled Potential Emissions (tons/yr)

Emissions Unit	PE	PM_{10}	SO_2	NO_X	CO	VOC	Single HAP	Total HAP
B001 - Thermal Oxidizer / Waste Heat Recovery Boiler #1	11.56	11.56	95.74	92.86	88.25	23.11	1.76	8.33
B002 - Thermal Oxidizer / Waste Heat Recovery Boiler #2								
P005 - Mash and Yeast Operations								
P007 - Distillation Process								
P008 - DDGS Dryer #1								
P009 - DDGS Dryer #2								
P010 - DDGS Dryer #3								
P011 - DDGS Dryer #4								
P013 - Methanator Flare (emissions vented to DDGS Dryer)								
P902 - DDGS Handling and Cooling (B001/B002 stack only)								
F002 - Grain Drying	10.08	2.69	0.018	3.00	2.52	0.17	---	---
J001 - Denatured Ethanol Truck and Rail Loadout	0.0026	0.0026	0.0026	1.52	8.07	14.39	---	---
P001 - Grain Hammer #1	3.90	3.90	---	---	---	---	---	---
P002 - Grain Hammer #2								
P003 - Grain Hammer #3								
P004 - Grain Hammer #4								
P006 - Fermentation and Beer Well	0.66	0.35	---	---	---	38.34	6.13	6.30
P012 - Cooling Tower	13.70	13.70	---	---	---	---	---	---
P013 - Methanator Flare (pilot for flare only)	0.0033	0.0033	0.0026	0.044	0.037	0.0024	---	---
P014 - Emergency Fire water pump	0.015	0.015	0.098	0.86	0.045	0.023	---	---
P901 - Grain Receiving, Handling and Storage (stack only)	10.08	10.08	---	---	---	---	---	---
P902 - DDGS Handling & Cooling (S70 stack only)	3.23	3.23	---	---	---	10.51	0.63	1.20
P903 - DDGS Loadout to Truck and Rail (stack only)	1.71	1.71	---	---	---	---	---	---
P904 - Four Steel Grain Storage Bins	9.75	2.46	---	---	---	---	---	---
T001 - 190 Proof Ethanol Storage Tank	---	---	---	---	---	0.53	---	---
T002 - 200 Proof Ethanol Storage Tank	---	---	---	---	---	0.53	---	---
T003 - Gasoline Denaturant Storage Tank	---	---	---	---	---	1.29	---	---
T004 - Denatured Ethanol Storage Tank #1	---	---	---	---	---	0.30	---	---
T005 - Denatured Ethanol Storage Tank #2	---	---	---	---	---	0.30	---	---
T006 - Denatured Ethanol Storage Tank #3	---	---	---	---	---	0.30	---	---
Total	64.69	49.69	95.86	98.28	98.91	89.79	8.53	15.83

Note that the highest single HAP is acetaldehyde.

The terms and conditions in this FEPTIO will limit the emissions to the values listed in Table 2. This is less than 100 TPY, which is the major source threshold with respect to Title V and New Source Review. Potential emissions have been limited through the use of regenerative thermal oxidizers at 98% control, baghouses at 0.005 gr/dscf grain loading, wet packed bed scrubber at 98% control, flares at 98% control, drift eliminators on the cooling tower, internal floating roofs on tanks, column perforations on the column

dryer, and compliance with applicable OAC rules, emission limitations, monitoring, record keeping and reporting requirements.

6. Please provide additional notes or comments as necessary:

   None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

Pollutant	Tons Per Year
VOC	14.39
CO	8.07
NO_X	1.52
PE	0.003
PM_{10}	0.003
SO_2	0.003

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

DRAFT

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

Facility ID:	0819750245
Permit Number:	P0104662
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	5/18/2009
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

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

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Authorization

Facility ID: 0819750245
Application Number(s): A0036984
Permit Number: P0104662
Permit Description: Increase in the allowable annual hours of operation from 3200 hours per year to 3500 hours per year.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: $1,250.00 *DO NOT send payment at this time - subject to change before final issuance*
Issue Date: 5/18/2009
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

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

Chris Korleski
Director

Authorization (continued)

Permit Number: P0104662
Permit Description: Increase in the allowable annual hours of operation from 3200 hours per year to 3500 hours per year.

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

Emissions Unit ID:	**J001**
Company Equipment ID:	Loadout Rack
Superseded Permit Number:	
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. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. 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 taken by 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 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 emission 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.

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. J001, Loadout Rack

Operations, Property and/or Equipment Description:

Denatured Ethanol Loading Rack Controlled with a Flare

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)(d), d)(3), d)(4) and e)(3).

(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)b, b)(2)a through b)(2)f, c), d)(1), d)(2), e)(1), e)(2), f)(1)b, f)(1)c, f)(1)d, f)(1)f and f)(1)g.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	Volatile Organic Compound (VOC) emissions shall not exceed 8.22 lbs/hr. See b)(2)b through b)(2)f and c)(3). The requirements established pursuant to this rule also include compliance with the requirements of OAC rules 3745-31-05(D) and 3745-31-05(E).
b.	OAC rule 3745-31-05(D) (synthetic minor to avoid TV)	VOC emissions shall not exceed 14.39 tons per rolling 12-month period. Carbon monoxide (CO) emissions from the flare shall not exceed 8.07 tons per rolling 12-month period. Nitrogen oxide (NO_X) emissions from the flare shall not exceed 1.52 ton per rolling 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D) (synthetic minor to avoid TV)	Particulate emissions (PE) and emissions of particulate matter less than 10 microns in diameter (PM_{10}) from the flare shall not exceed 0.003 ton per rolling 12-month period. Sulfur dioxide (SO_2) emissions from the flare shall not exceed 0.003 ton per rolling 12-month period. See b)(2)g and b)(2)h.
c.	OAC rule 3745-21-08(B)	CO emissions from the flare shall not exceed 4.60 lbs/hr. See b)(2)i.
d.	ORC 3704.03(F) and OAC rule 3745-114-01	See d)(3), d)(4) and e)(3).

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

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

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

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

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

g. Permit to Install and Operate P0104662 for this air contaminant source takes into account an hours of operation limitation of 3,500 hours per year 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) for CO emissions.

h. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_X, PE, PM_{10} and SO_2 emissions from this air

contaminant source since the uncontrolled potential to emit for NO_X, PE, PM_{10} and SO_2 is each less than 10 tons/year.

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

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

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

k. The Best Available Technology (BAT) control requirements for this emissions unit has been determined to be the use of a flare system, whenever this air contaminant source is in operation, with a minimum control efficiency of 98%, by weight for VOC. 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) Operational Restrictions

(1) The annual operating hours for this emissions unit shall not exceed 3,500, based upon a rolling, 12-month summation of the operating hours.

(2) The annual amount of denatured ethanol processed through this emissions unit shall not exceed 132,000,000 gallons, based upon a rolling, 12-month summation of the denatured ethanol production.

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

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

b. the flare shall be operated with a pilot flame. The 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 operating hours of the flare;

b. the amount of denatured ethanol processed;

c. the NO_X, CO, VOC, PE, PM_{10} and SO_2 emissions, in tons;

d. the rolling, 12-month summation of the operating hours;

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

f. the rolling, 12-month summation of NO_X, CO, VOC, PE, PM_{10} and SO_2 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 collect and record a daily log or record of operating time for the closed vent system, flare and monitoring equipment.

(3) The permit to install for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was

compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Toluene

TLV (mg/m^3): 188.4

Maximum Hourly Emission Rate (lbs/hr): 1.35

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 50.36 (entire facility)

MAGLC (ug/m3): 4,486

Pollutant: Xylene

TLV (mg/m^3): 434.19

Maximum Hourly Emission Rate (lbs/hr): 1.08

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 40.29 (entire facility)

MAGLC (ug/m^3): 10,338

Pollutant: Methyl tert-Butyl Ether (MTBE)

TLV (mg/m^3): 180.31

Maximum Hourly Emission Rate (lbs/hr): 0.67

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 25.18 (entire facility)

MAGLC (ug/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 operating hours limitation;

ii. all exceedances of the rolling, 12-month denatured ethanol production limitation;

iii. all exceedances of the rolling, 12-month NO_X, CO, VOC, PE, PM_{10} and SO_2 emissions limitations;

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

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

vi. 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

vii. 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 which specify the total NO_X, CO, VOC, PE, PM_{10} and SO_2 emissions from this emissions unit in tons per rolling 12-month period 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.

(3) 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.

(4) 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.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

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

VOC emissions shall not exceed 8.22 lbs/hr.

<u>Applicable Compliance Method:</u>

Compliance shall be determined using the 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 has been demonstrated using inputs representing Potential To Emit (PTE) conditions as follows:

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

where=

S= saturation factor (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 ^oF + 460 = 511 ^oR)

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

LL= 7.32 lb VOC/1000 gallons to truck and

LL= 0.46 lb VOC/1000 gallons to rail

Capture efficiency = 99%

Control efficiency of flare = 98%

Compliance with the hourly emissions rate for VOCs will be determined as follows:

LL_{truck} = [{(7.32 * 0.99 * (1 - 0.98)) + (7.32 * (1 - 0.99))} / 1000 gal] * 132,000,000 gal per rolling 12-month period / 3,500 hrs/yr = 8.22 lbs/hr

LL_{rail} = [{(0.46 * 0.99 * (1 - 0.98)) + (0.46 * (1 - 0.99))} / 1000 gal] * 132,000,000 gal per rolling 12-month period / 3,500 lbs/ton = 0.51 lbs/hr

LL_{total} = maximum of LL_{truck} and LL_{rail} = 8.22 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).

b. Emissions Limitation:

VOC emissions shall not exceed 14.39 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 the 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 has been demonstrated using inputs representing Potential To Emit (PTE) conditions as follows:

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

where=

S= saturation factor (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 ^{o}R)

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

LL= 7.32 lb VOC/1000 gallons to truck and

LL= 0.46 lb VOC/1000 gallons to rail

Capture efficiency = 99%

Control efficiency of flare = 98%

Compliance with the 12-month rolling allowable emissions rate for VOCs will be determined as follows:

LL_{truck} = [{(7.32 * 0.99 * (1 - 0.98)) + (7.32 * (1 - 0.99))} / 1000 gal] * 132,000,000 gal per rolling 12-month period / 2,000 lbs/ton = 14.39 tons per rolling 12-month period

LL_{rail} = [{(0.46 * 0.99 * (1 - 0.98)) + (0.46 * (1 - 0.99))} / 1000 gal] * 132,000,000 gal per rolling 12-month period / 2,000 lbs/ton = 0.89 tons per rolling 12-month period

LL_{total} = maximum of LL_{truck} and LL_{rail} = 14.39 tons per rolling 12-month period

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 8.07 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 Tables 1.4-1 (July 1998) for the pilot flame and 13.5-1 (January 1995) for the flare and inputs representing the Potential To Emit (PTE), as follows:

Emissions = Flare Emissions + Pilot Light Emissions

Flare Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)

Flare Emissions = (12.4 mmBtu/hr) * (0.37 lb/mmBtu) * (3500 hrs/yr) / (2000 lbs/ton)

Flare Emissions = 8.03 tons per rolling 12-month period

Pilot Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)

Pilot Emissions = (0.1 mmBtu/hr) * (0.084 lb/mmBtu) * (8760 hrs/yr) / (2000 lbs/ton)

Pilot Emissions = 0.037 tons per rolling 12-month period

Emissions = 8.03 + 0.037 = 8.07 tons per rolling 12-month period

d. Emissions Limitation:

NO_X emissions from the flare shall not exceed 1.52 tons per rolling 12-month period.

Applicable Compliance Method:

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

Emissions = Flare Emissions + Pilot Light Emissions

Flare Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)

Flare Emissions = (12.4 mmBtu/hr) * (0.068 lb/mmBtu) * (3500 hrs/yr) / (2000 lbs/ton)

Flare Emissions = 1.48 tons per rolling 12-month period

Pilot Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)

Pilot Emissions = (0.1 mmBtu/hr) * (0.1 lb/mmBtu) * (8760 hrs/yr) / (2000 lbs/ton)

Pilot Emissions = 0.044 tons per rolling 12-month period

Emissions = 1.48 + 0.044 = 1.52 tons per rolling 12-month period

e. Emissions Limitation:

CO emissions from the flare shall not exceed 4.60 lbs/hr.

Applicable Compliance Method:

Compliance shall be determined using AP-42 Tables 1.4-1 (July 1998) for the pilot flame and 13.5-1 (January 1995) for the flare and inputs representing the Potential To Emit (PTE), as follows:

Emissions = Flare Emissions + Pilot Light Emissions

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

Flare Emissions = (12.4 mmBtu/hr) * (0.37 lb/mmBtu) = 4.59 lbs/hr

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

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

Emissions = 4.59 + 0.01 = 4.60 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).

f. Emissions Limitation:

PE from the flare shall not exceed 0.003 tons per rolling 12-month period.

PM_{10} emissions from the flare shall not exceed 0.003 tons per rolling 12-month period.

Applicable Compliance Method:

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

Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)

Emissions = (0.1 mmBtu/hr) * (0.0076 lb/mmBtu) * (8760 hrs/yr) / (2000 lbs/ton)

Emissions = 0.003 ton per rolling 12-month period

g. Emissions Limitation:

SO_2 emissions from the flare shall not exceed 0.003 tons per rolling 12-month period.

Applicable Compliance Method:

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

Emissions = (maximum heat input) * (emission factor) * (operating hours) / (2000 lbs/ton)

Emissions = (0.1 mmBtu/hr) * (0.006 lb/mmBtu) * (8760 hrs/yr) / (2000 lbs/ton)

Emissions = 0.003 ton per rolling 12-month period.

g) Miscellaneous Requirements

(1) The requirements of this permit supercede the requirements of PTI 08-04878 for this emissions unit, issued April 22, 2008 and represent a 0.13 ton/yr increase in NO_X emissions and a 0.69 ton/yr increase in CO emissions for this emissions unit.