



State of Ohio Environmental Protection Agency

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

12/16/2009

Mr. Mourad Yesayan
PEA Lima, LLC
2485 Houx Parkway
Lima, OH 45804

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0302020341
Permit Number: P0105681
Permit Type: Renewal
County: Allen

Certified Mail

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

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.

Ohio EPA maintains a document entitled "Frequently Asked Questions about the PTIO". The document can be downloaded from the DAPC Web page, www.epa.ohio.gov/dapc, from the "Permits" link. This document contains additional information related to your permit, such as what activities are covered under the PTIO, who has enforcement authority over the permit and Ohio EPA's authorization to inspect your facility and records. Please contact the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469 if you need assistance.

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of \$70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

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

If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northwest District Office. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page www.epa.ohio.gov/dapc.

Sincerely,

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

Cc: Ohio EPA-NWDO

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director



**State of Ohio Environmental Protection Agency
Division of Air Pollution Control**

FINAL

**Air Pollution Permit-to-Install and Operate
for
PEA Lima, LLC**

Facility ID: 0302020341
Permit Number: P0105681
Permit Type: Renewal
Issued: 12/16/2009
Effective: 12/16/2009
Expiration: 12/16/2019



Air Pollution Permit-to-Install and Operate
for
PEA Lima, LLC

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State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate
Permit Number: P0105681
Facility ID: 0302020341
Effective Date: 12/16/2009

Authorization

Facility ID: 0302020341
Application Number(s): M0000630
Permit Number: P0105681
Permit Description: Administrative modification of permit number P0105072 (issued 07/21/09) to re-issue the permit as a Permit to Install and Operate (PTIO) for purposes of re-establishing facility status as a non-Title V facility.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 12/16/2009
Effective Date: 12/16/2009
Expiration Date: 12/16/2019
Permit Evaluation Report (PER) Annual Date: Apr 1 - Mar 31, Due May 15

This document constitutes issuance to:

PEA Lima, LLC
1227 EAST HANTHORN ROAD
Lima, OH 45804

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:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

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



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate
Permit Number: P0105681
Facility ID: 0302020341
Effective Date: 12/16/2009

Authorization (continued)

Permit Number: P0105681
Permit Description: Administrative modification of permit number P0105072 (issued 07/21/09) to re-issue the permit as a Permit to Install and Operate (PTIO) for purposes of re-establishing facility status as a non-Title V facility.

Permits for the following emissions unit(s) or groups of emissions units are in this document as indicated below:

Emissions Unit ID:	P002
Company Equipment ID:	Ethanol Production Operations
Superseded Permit Number:	P0105072
General Permit Category and Type:	Not Applicable



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105681

Facility ID: 0302020341

Effective Date: 12/16/2009

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 Ohio EPA DAPC, Northwest District Office 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.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105681

Facility ID: 0302020341

Effective Date: 12/16/2009

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.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105681

Facility ID: 0302020341

Effective Date: 12/16/2009

B. Facility-Wide Terms and Conditions



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105681

Facility ID: 0302020341

Effective Date: 12/16/2009

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.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105681

Facility ID: 0302020341

Effective Date: 12/16/2009

C. Emissions Unit Terms and Conditions



1. P002, Ethanol Production Operations

Operations, Property and/or Equipment Description:

Ethanol Production Operations (Including Fermentors, Beer Well and Column, Strippers and Evaporators) Controlled by CO2 Scrubber, Vent Scrubber, and Bio 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. d)(9)

(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. None.

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 3745-21-09 (DD)	See b)(2)d. and g)(1)
b.	40 CFR Part 60 Subpart VV	See b)(2)d. and g)(1)
c.	OAC rule 3745-17-11 (B)(1)	See b)(2)c.
d.	OAC rule 3745-17-07 (A)	See b)(2)f.
e.	OAC rule 3745-21-08 (B)	See b)(2)b.
f.	OAC rule 3745-18-06 (E)(2)	See b)(2)c.
g.	OAC rule 3745-31-05 (A)(3)(a)	Control Requirements (see b)(2)a.) See b)(2)e. No visible fugitive particulate emissions (PE) from any building openings (associated with this emissions unit). <u>CO2 Scrubber Stack</u> 13.23 lbs of volatile organic compounds (VOC)/hour, 58.00 tons of VOC/year <u>Thermal Oxidizer Stack</u> 1.02 lbs of PE/hour, 4.50 tons of PE/year



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		5.62 lbs of VOC/hr, 24.62 tons of VOC/yr 5.88 lbs of NOx/hr, 25.80 tons of NOx/yr 9.88 lbs of CO/hr, 43.30 tons of CO/yr 9.13 lbs of SO2/hr, 40.00 tons of SO2/yr Visible PE shall not exceed 10% opacity, as a six-minute average from the thermal oxidizer stack. <u>Fugitive VOC Emissions</u> 4.50 tons of VOC/year See b)(2)a.iv. and b)(2)d.

(2) Additional Terms and Conditions

- a. Best Available Technology (BAT) control requirements for this emissions unit has been determined to be use of the following:
 - i. a high efficiency wet scrubber (CO2 scrubber) for VOC control on the fermentation process. The scrubber shall meet a minimum control efficiency of 99% for VOC emissions;
 - ii. a regenerative thermal oxidizer meeting a minimum control efficiency of 98% for PE emissions and 95% for VOC emissions;
 - iii. firing only natural gas and the use of low NOx burners in the dryers. BAT also includes operation of the dryers to be continuously maintained at or below a value to be determined by design information, and or manufacturer's data [see condition g)(3) for the establishment of the temperature of the dryers]; and
 - iv. implementation of a fugitive leak detection and repair program (LDAR) for all the miscellaneous process equipment the associated with this emissions unit.
- b. The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3)(a) in this permit to install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the



requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3)(a).
- d. 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).
- e. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(DD), and 40 CFR 60 Subpart VV.
- f. The visible PE limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3)(a).

c) Operational Restrictions

- (1) The permittee shall burn only natural gas, propane, or butane in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, propane, or butane, the permittee shall maintain a record of the type and quantity of fuel combusted in this emissions unit.
- (2) The acceptable combustion temperature within the thermal oxidizer, during any period of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be



within \pm 1 percent of the temperature being measured or \pm 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance. Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

- a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and
- b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

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

- (4) The acceptable range/limit for the pressure drop across the CO₂ scrubber and the scrubber liquid flow rate shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range or limit for each parameter is established to demonstrate compliance.

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

- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge), and the scrubber liquid flow rate (in gallons per minute), including periods of startup and shutdown. 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. The acceptable pressure drop and liquid flow rate and shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance. Following compliance testing, the permittee shall collect and record the following information on a once per shift basis when the emissions unit(s) is/are in operation:
 - a. the pressure drop across the scrubber, in inches of water;



- b. the scrubber liquid flow rate, in gallons per minute; and
- c. a log (date and total time) of the downtime or bypass of the scrubber, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

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

- (6) The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature within the dryers when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modification deemed necessary by the permittee. The permittee shall collect and record all time periods during which the maximum temperature within the dryers, when the emissions unit is in operation, is more than the maximum temperature requirement in section b)(2)a.
- (7) Whenever the following monitored parameters deviate from the range(s) or limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation(s):
 - a. average combustion temperature within the thermal oxidizer;
 - b. pressure drop across CO₂ scrubber;
 - c. CO₂ scrubber liquid flow rate; and/or
 - d. maximum operating temperature for each dryer.
- (8) The permittee shall maintain records of the following information for each investigation required in d)(7):
 - a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;
 - d. the name(s) of the personnel who conducted the investigation; and
 - e. the findings and recommendations.

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

- f. a description of the corrective action;
- g. the date corrective action was completed;



- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the temperature readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

- (9) Permit to Install 03-16271 for emissions units J001, P002, P004, P903, and T001-T004 were evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the Permit to Install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Hexane

TLV (mg/m³): 176.23

Maximum Hourly Emission Rate (lbs/hr): 0.54

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 17.12

MAGLC (ug/m³): 4,196

Pollutant: Aliphatic Hydrocarbons

TLV (mg/m³): 1803.0

Maximum Hourly Emission Rate (lbs/hr): 1.57

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 49.45

MAGLC (ug/m³): 42,928

Pollutant: Pentane

TLV (mg/m³): 1475.5

Maximum Hourly Emission Rate (lbs/hr): 0.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 24.72

MAGLC (ug/m³): 35,130

Pollutant: Ethanol

TLV (mg/m³): 1884.3

Maximum Hourly Emission Rate (lbs/hr): 17.15

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1101.10

MAGLC (ug/m³): 44,863

Pollutant: Acetaldehyde

TLV (mg/m³): 45.04

Maximum Hourly Emission Rate (lbs/hr): 0.93



Predicted 1-Hour Maximum Ground-Level Concentration ($\mu\text{g}/\text{m}^3$): 157.68
MAGLC ($\mu\text{g}/\text{m}^3$): 1,072

Physical changes to or changes in the method of operation of the emissions units after installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a toxic air contaminant listed in OAC rule 3745-114-01 with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01 that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- d. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - e. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - f. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
- (10) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from any egress points (i.e., building windows, doors, roof monitors, etc.) associated with this emissions unit.



The presence or absence of any visible fugitive emissions shall be noted in an operations log, including the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. the total duration of any visible emission incident; and
- c. any corrective actions taken to minimize or eliminate the visible emissions.

e) Reporting Requirements

- (1) 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.
- (2) The permittee shall identify in the annual PER the following information concerning the operations of the thermal oxidizer, CO₂ scrubber, and dryers during the 12-month reporting period for this/these emissions unit(s):
 - a. each period of time (start time and date, and end time and date) when the following parameters were outside of the range(s) or limit(s) specified by the manufacturer and/or outside of the acceptable range(s) or limit(s) following any required compliance demonstration:
 - i. average combustion temperature within the thermal oxidizer;
 - ii. pressure drop across the CO₂ scrubber;
 - iii. liquid flow rate for the CO₂ scrubber; and/or
 - iv. maximum operating temperature for each dryer.
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to:
 - i. the thermal oxidizer; and/or
 - ii. the CO₂ scrubber;
 - c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and



- e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(10):
- a. all days during which any visible fugitive particulate emissions were observed from the area immediately above the capture system serving this emissions unit; and
 - b. any corrective actions taken to eliminate the visible fugitive particulate emissions.
- f) Testing Requirements
- (1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 180 days after initial startup of such emissions unit. The testing time frame(s) specified may be amended or waived for cause upon prior request of, and written approval of, the Ohio EPA Northwest District Office.
 - b. The emission testing shall be conducted to demonstrate compliance with the VOC mass emissions limitations from the CO₂ scrubber and the NO_x, CO, VOC, SO₂, and PE mass emissions limitations from the thermal oxidizer controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitation for VOCs from the CO₂ and for the control efficiency limitation for PE and VOCs from the thermal oxidizer controlling this emissions unit.
 - c. The following test methods shall be employed to demonstrate compliance with the above emissions limitations: for PE, Methods 1-5 of 40 CFR Part 60, Appendix A (including the back half of the sampling train); for NO_x, Methods 1-4 and 7 of 40 CFR Part 60, Appendix A; for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A for SO₂, Methods 1-4 and 6 of 40 CFR Part 60, Appendix A and for VOC Methods 1-4 and 18, 25 or 25a of 40 CFR Part 60, Appendix A. The "Midwest Scaling Protocol for the Measurement of VOC Mass Emissions", Dated 8/04 shall be used in conjunction with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining VOC mass emissions. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, NWDO. The test method(s) which must be employed to demonstrate compliance with the control efficiencies are specified below.
 - d. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for VOC emissions. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.



- e. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, NWDO.
 - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, NWDO's refusal to accept the results of the emission test(s).
 - g. Personnel from the Ohio EPA, NWDO shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - h. A comprehensive written report of the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.
- (2) Future testing requirements shall be conducted in accordance with applicable rules, policies, etc. (i.e. Engineering Guide #16, OAC rule 3745-15-04, etc.). Future testing requirements may be amended or waived for cause upon prior request of, and written approval of, the Ohio EPA Northwest District Office.
- (3) Compliance with the emission limitations in Section b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

CO2 Scrubber Stack:

13.23 lbs of VOC/hour, 58.00 tons of VOC/year

Applicable Compliance Method:

Compliance with the hourly mass emission limitations for VOC shall be demonstrated by the performance testing as described in condition f)(1).

The annual emission limitation for VOC was developed by multiplying the respective hourly emission limitation by maximum operating schedule of 8760 hours/year, and dividing by 2000 lbs/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation will be assumed.

b. Emission Limitation:

Thermal Oxidizer Stack:

1.02 lbs of PE/hr, 4.50 tons of PE/yr
5.62 lbs of VOC/hr, 24.62 tons of VOC/yr
5.88 lbs of NOx/hr, 25.80 tons of NOx/yr



9.88 lbs of CO/hr, 43.30 tons of CO/yr
9.13 lbs of SO₂/hr, 40.00 tons of SO₂/yr

Applicable Compliance Method:

Compliance with the hourly mass emission limitations shall be demonstrated by the performance testing required in condition f)(1). The annual emission limitations were developed by multiplying the respective hourly emission limitation by the maximum operating schedule of 8760 hours/year, and then dividing by 2000 lbs/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation will be assumed.

- c. Emission Limitation:
4.50 tons of fugitive VOC/year

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the respective emission factors and control efficiencies of all the proposed equipment subject to the LDAR program, as submitted by the permittee in PTI application #03-16271, Table 4-E. Therefore, if compliance is shown with the LDAR program as described in condition b)(2)d. and g).1., compliance with the annual limitation will be assumed.

- d. Emission Limitation:
Visible PE shall not exceed 10% opacity, as a six-minute average (thermal oxidizer stack)

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be determined in accordance with the test methods and procedures in U.S. EPA Method 9, which is located in 40 CFR Part 60, Appendix A.

- e. Emission Limitation:
No visible fugitive PE from any building openings (associated with this emissions unit).

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be determined in accordance with the test methods and procedures in U.S. EPA Method 22, which is located in 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) Within 180 days of the start up of this emissions unit, the permittee shall develop an onsite fugitive LDAR program. At a minimum, the program shall include all the appropriate process equipment and regulated components that are subject to this program and clearly identify how the permittee will comply with the appropriate provisions (includes operational restrictions, monitoring and recordkeeping, reporting, and testing) of OAC rule 3745-21-09 (DD), and 40 CFR 60 Subpart VV.
- (2) Within 180 days of the start up of this emissions unit, the permittee shall develop and implement a written startup, shutdown, and malfunction (SSM) plan. This plan must be



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105681

Facility ID: 0302020341

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maintained on site and is subject to review and approval of the OEPA, Northwest District Office.

- (3) The permittee shall submit information specifying the maximum operating temperature for each dryer [see b)(2)a.iii]. The information shall be submitted in association with the "Intent to Test" notification specified in section f)(1).f.
- (4) This permit action shall supersede the permit requirements for emissions unit P002 as contained in PTI 03-16271 issued on August 8, 2006 and PTI P0105072 issued on July 21, 2009.