



Environmental
Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

7/29/2010

Certified Mail

Mr. Kenneth Frato
The Lubrizol Corporation
155 Freedom Road
Painesville, OH 44077

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0243000024
Permit Number: P0106347
Permit Type: Initial Installation
County: Lake

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT
No	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 (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Kevin Boyce," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

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

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northeast District Office. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: U.S. EPA
Ohio EPA-NEDO; Pennsylvania; Canada



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
The Lubrizol Corporation**

Facility ID: 0243000024
Permit Number: P0106347
Permit Type: Initial Installation
Issued: 7/29/2010
Effective: 7/29/2010



Division of Air Pollution Control
Permit-to-Install
for
The Lubrizol Corporation

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Authorization

Facility ID: 0243000024
Facility Description: Manufacturer of specialty chemicals
Application Number(s): A0039248
Permit Number: P0106347
Permit Description: Installation of a process for the manufacture of lubricant additives
Permit Type: Initial Installation
Permit Fee: \$500.00
Issue Date: 7/29/2010
Effective Date: 7/29/2010

This document constitutes issuance to:

The Lubrizol Corporation
155 Freedom Road
Painesville, OH 44077-1234

of a Permit-to-Install 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, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 43087
(330)425-9171

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Chris Korleski
Director

Authorization (continued)

Permit Number: P0106347
Permit Description: Installation of a process for the manufacture of lubricant additives

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

Emissions Unit ID:	P078
Company Equipment ID:	Process AP
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

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

- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northeast District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:



- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

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

10. Applicability

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

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

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

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

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

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

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

14. Public Disclosure

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

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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.

C. Emissions Unit Terms and Conditions



1. P078, Process AP

Operations, Property and/or Equipment Description:

Reactor Process AP for the production of lubricant additives using two reactor systems. Volatile organic compound emissions are controlled by two 15 mmBTU/hr incinerators (AC-12 Fm Inc) or flare (F-4 Flare). Particulate matter emissions are controlled by an incinerator (AC-12 Fm Inc).

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific 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 (LL)	See b)(2)a. through b)(2)e.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	<p>This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.</p> <p>Nitrogen oxide (NOx) emissions shall not exceed 1.50 lbs/hr and 6.57 tons per year from each thermal incinerator.</p> <p>Carbon monoxide (CO) emissions shall not exceed 1.26 lbs/hr and 5.52 tons per year from each thermal incinerator.</p> <p>See b)(2)f.</p> <p>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC, particulate emissions, and SO2 emissions from the natural gas combustion in the thermal incinerators controlling this air contaminant source and to the VOC and particulate emissions emitted by the AP Process since the potential to emit after controls for each air contaminant is less</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(A)(3) as effective 11/30/01	<p>than 10 tons/year.</p> <p>The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 31, 2001, in this permit. On December 1, 2006, paragraph (A)(3) OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.</p> <p>Nitrogen oxide (NOx) emissions shall not exceed 1.50 lbs/hr and 6.57 tons per year from each thermal incinerator.</p> <p>Carbon monoxide (CO) emissions shall not exceed 1.26 lbs/hr and 5.52 tons per year from each thermal incinerator.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.2 lbs/hr and 0.9 tons per year from the AP process after controls.</p> <p>Particulate emissions shall not exceed 0.0002 lbs/hr and 0.1 tons per year from the AP process after controls.</p> <p>See b)(2)f and b)(2)g.</p>

- (2) Additional Terms and Conditions
- a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), or a flare that meets the requirements of paragraph OAC rule 3745-21-09(DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).
 - b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.
 - c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:
 - i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or
 - ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.
 - d. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:
 - i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.
 - ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.
 - iii. The flare shall be steam-assisted, air-assisted or non-assisted.
 - iv. 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 three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.
 - v. Except as provided in the Standard Terms and Conditions of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum

permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

- vi. Excluded from the requirements of the Standard Terms and Conditions of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:
 - (a) 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 greater than one thousand Btu/scf.
 - (b) The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.
 - e. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals which minimize the amount of VOC exposed to the ambient air.
 - f. The short term emission limitations for NO_x and CO from each thermal incinerator was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.
 - g. The short term emission limitations for VOC and PM were established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- c) Operational Restrictions
- (1) None.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall develop emission factors for the amount of uncontrolled VOC and PM emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC and PM emitted per ton of final product generated, or tons of VOC and PM emitted per batch run.
 - (2) The permittee shall submit VOC and PM emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Emission Inventory Improvement Program Guidance Document, Volume II, Chapter 16: Methods for Estimating Air Emissions from Chemical Manufacturing Facilities or other Ohio EPA-approved calculation methods. Detailed calculations of all VOC and PM emission factors shall be kept on site and available for Ohio EPA review.

- (3) If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.
- (4) The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.
- (5) The permittee shall collect and record the following information for each month:
- a. the company identification of each final product generated;
 - b. the quantity of each final product generated, in tons;
 - c. the number of batches run for each final product generated;
 - d. the minimum cycle time for each final product;
 - e. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);
 - f. the VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare, in tons, using the following equation:
$$E \text{ (Uncontrolled)} = (\text{quantity of final product, in tons, or number of batches run}) \times (\text{emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run});$$
 - g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator or flare(s), in tons per month;
 - h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month);
 - i. the VOC emission rate from the control device egress, for all final products generated, in which the VOC emissions were controlled by the incinerator(s) or flare, in tons, using the following equation:
$$E \text{ (Controlled)} = (\text{quantity of final product, in tons, or number of batches run}) \times (\text{emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run}) \times (1 - \text{capture and control efficiency of the control device determined by the most recent emission test});$$
 - j. the emission factors used to determine the amount of PM emitted for each final product generated (in tons of PM/ton of final product generated or tons of PM/batch run); and

- k. the PM emission rate, for all final products generated, in tons, using the following equation:
- $$E = [(quantity\ of\ final\ product\ in\ which\ the\ emission\ were\ uncontrolled,\ in\ tons,\ or\ number\ of\ batches\ run) \times (emission\ factor,\ in\ tons\ of\ PM/ton\ of\ final\ product\ generated\ or\ tons\ of\ PM/batch\ run)] + [(quantity\ of\ final\ product\ in\ which\ the\ emissions\ were\ controlled,\ in\ tons,\ or\ number\ of\ batches\ run) \times (emission\ factor,\ in\ tons\ of\ PM/ton\ of\ final\ product\ generated\ or\ tons\ of\ PM/batch\ run)] \times (1 - capture\ and\ control\ efficiency\ of\ the\ control\ device\ as\ guaranteed\ by\ the\ manufacturer)$$
- (6) The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. 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, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.
- (7) The permittee shall collect and record the following information for each day:
- all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and
 - a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
- (8) Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
- (9) 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 above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names 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.

- (10) The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.
- (11) This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.
- (12) A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.
- (13) The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).
- (14) The permittee shall record the following information each day:
 - a. all periods during which there was no pilot flame; and
 - b. the operating times for the flare, monitoring equipment, and the associated emissions unit.
- (15) Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
- (16) 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 operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names 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.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

f) Testing Requirements

- (1) Compliance with the allowable emission limitations in b)(1) and b)(2) shall be determined in accordance with the following methods:

- a. Emission Limitation: VOC emissions shall not exceed 5 tons per rolling twelve-month period from all process vent streams not controlled by the incinerator(s) or flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in d). If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

- b. Emission Limitation:

Nitrogen oxide (NO_x) emissions shall not exceed 1.50 lbs/hr and 6.57 tons per year from each thermal incinerator.

Applicable Compliance Method: Compliance with the hourly limitation shall be based on a one time calculation by using emission factors from AP-42, Section 1.4 (1998) for natural gas combustion and the maximum input capacity of the gas burners.

$$E(\text{NO}_x) = (15 \text{ mm BTU/hr}) * [(100 \text{ lbs/mm scf}) / (1,000 \text{ BTU/scf})]$$

If required, the compliance shall be determined by emissions testing using U.S. EPA reference Method 7 or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton). Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

- c. Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 1.26 lbs/hr and 5.52 tons per year from each thermal incinerator.

Applicable Compliance Method: Compliance with the hourly limitation shall be based on a one time calculation by using emission factors from AP-42, Section 1.4 (1998) for natural gas combustion and the maximum input capacity of the gas burners.

$$E(\text{CO}) = (15 \text{ mm BTU/hr}) * [(84 \text{ lbs/mm scf}) / (1,000 \text{ BTU/scf})]$$

If required, the compliance shall be determined by emissions testing using U.S. EPA reference Method 10, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

Compliance with the annual limitation is based on the hourly emission rate multiplied by 8,760 (hours per year) and divided by 2,000 (pounds per ton). Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

Volatile organic compound (VOC) emissions shall not exceed 0.2 lbs/hr and 0.9 tons per year from the AP process after controls.

Applicable Compliance Method: Compliance with the hourly emission limitations shall be determined by use of the Emission Inventory Improvement Program Guidance Document, Volume II, Chapter 16: Methods for Estimating Air Emissions from Chemical Manufacturing Facilities, or other emission calculator approved by the Ohio EPA, and control efficiency determined during the most recent incinerator compliance demonstration and the manufacturer's guaranteed control efficiency of the flare.

Compliance with the annual emission limitation shall be demonstrated by summation of the monthly VOC emission from the incinerator or flare recorded according to d)(5)i. for the calendar year and the rolling, 12-month summation of VOC emissions not controlled by the incinerator or flare and dividing by 2000 pounds per ton if appropriate.

e. Emission Limitation:

Particulate emissions shall not exceed 0.0002 lbs/hr and 0.1 tons per year from the AP process after controls.

Applicable Compliance Method: Compliance with the hourly emission limitations shall be determined by use of the Emission Inventory Improvement Program Guidance Document, Volume II, Chapter 16: Methods for Estimating Air Emissions from Chemical Manufacturing Facilities, or other emission calculator approved by the Ohio EPA.

Compliance with the annual emission limitation shall be demonstrated by summation of the monthly PM emission recorded according to d)(5)k. for the calendar year and dividing by 2000 pounds per ton if appropriate.

- (2) Compliance for fume incinerator AC-12 Fm Inc shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

- g) Miscellaneous Requirements
 - (1) None