



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

12/10/2012

James Fain  
 Kraton Polymers U.S. LLC  
 2419 State Route 618  
 Belpre, OH 45714-0235

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL  
 Facility ID: 0684010011  
 Permit Number: P0103662  
 Permit Type: Administrative Modification  
 County: Washington

Certified Mail

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

Dear Permit Holder:

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

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

**How to appeal this permit**

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

Environmental Review Appeals Commission  
 77 South High Street, 17th Floor  
 Columbus, OH 43215

## **How to save money, reduce pollution and reduce energy consumption**

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: [www.ohioairquality.org/clean\\_air](http://www.ohioairquality.org/clean_air)

## **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/dapc/pemitsurvey.aspx](http://www.epa.ohio.gov/dapc/pemitsurvey.aspx) and give us feedback on your permitting experience. We value your opinion.

## **How to get an electronic copy of your permit**

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

If you have any questions, please contact Ohio EPA DAPC, Southeast District Office at (740)3858501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA  
Ohio EPA-SEDO; Pennsylvania; West Virginia



## Response to Comments

Facility ID:	0684010011
Facility Name:	Kraton Polymers U.S. LLC
Facility Description:	Thermoplastic elastomer manufacturing facility
Facility Address:	2419 State Route 618 Belpre, OH 45714-0235 Washington County
Permit:	P0103662, Permit-To-Install - Administrative Modification
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Marietta Times on 09/12/2012. The comment period ended on 10/12/2012.	
Hearing date (if held)	<b>None</b>
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

- 1. Topic: None, No comments were received.**





**FINAL**

**Division of Air Pollution Control**  
**Permit-to-Install**  
for  
Kraton Polymers U.S. LLC

Facility ID:	0684010011
Permit Number:	P0103662
Permit Type:	Administrative Modification
Issued:	12/10/2012
Effective:	12/10/2012





**Division of Air Pollution Control**  
**Permit-to-Install**  
for  
Kraton Polymers U.S. LLC

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**Final Permit-to-Install**  
Kraton Polymers U.S. LLC  
**Permit Number:** P0103662  
**Facility ID:** 0684010011  
**Effective Date:** 12/10/2012

## Authorization

Facility ID: 0684010011  
Facility Description: Thermoplastic elastomer manufacturing facility  
Application Number(s): M0000205  
Permit Number: P0103662  
Permit Description: Administrative modification to address inclusion of MACT terms, the control efficiency of the catalytic oxidizer, the removal of OAC rule 3745-21-07(G)(2) and (6) from the requirement of the finishing end, and revision to the BAT determination for the wet end flare  
Permit Type: Administrative Modification  
Permit Fee: \$625.00  
Issue Date: 12/10/2012  
Effective Date: 12/10/2012

This document constitutes issuance to:

Kraton Polymers U.S. LLC  
2419 State Route 618  
Belpre, OH 45714-0235

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

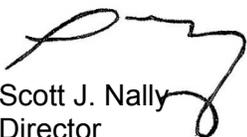
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office  
2195 Front Street  
Logan, OH 43138  
(740)385-8501

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Scott J. Nally  
Director



**Final Permit-to-Install**  
Kraton Polymers U.S. LLC  
**Permit Number:** P0103662  
**Facility ID:** 0684010011  
**Effective Date:** 12/10/2012

## Authorization (continued)

Permit Number: P0103662

Permit Description: Administrative modification to address inclusion of MACT terms, the control efficiency of the catalytic oxidizer, the removal of OAC rule 3745-21-07(G)(2) and (6) from the requirement of the finishing end, and revision to the BAT determination for the wet end flare

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

<b>Emissions Unit ID:</b>	<b>P007</b>
Company Equipment ID:	G-2 Process Unit
Superseded Permit Number:	06-08260
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install**  
Kraton Polymers U.S. LLC  
**Permit Number:** P0103662  
**Facility ID:** 0684010011  
**Effective Date:** 12/10/2012

## **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, Southeast 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, Southeast 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, Southeast 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, Southeast 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, Southeast 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, Southeast 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, Southeast 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.



**Final Permit-to-Install**  
Kraton Polymers U.S. LLC  
**Permit Number:** P0103662  
**Facility ID:** 0684010011  
**Effective Date:** 12/10/2012

## **B. Facility-Wide Terms and Conditions**



**Final Permit-to-Install**  
Kraton Polymers U.S. LLC  
**Permit Number:** P0103662  
**Facility ID:** 0684010011  
**Effective Date:** 12/10/2012

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under State law only:
  - a) None.
2. The following emissions unit in this permit is subject to 40 CFR Part 63, Subpart I: P007. The complete MACT requirements, including the MACT General provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Southeast District Office.



**Final Permit-to-Install**  
Kraton Polymers U.S. LLC  
**Permit Number:** P0103662  
**Facility ID:** 0684010011  
**Effective Date:** 12/10/2012

## **C. Emissions Unit Terms and Conditions**



**1. P007, G-2 Process Unit**

**Operations, Property and/or Equipment Description:**

- a) The "wet end" emissions from this process are controlled with a flare (North Side Flare). The "finishing end" of this process operates in either of the following modes: cyclone finishing system with process dryer emissions controlled with a catalytic oxidizer, an integral cyclone for product separation, and two integral baghouses for product separation followed by cartridge type filters; or LMW finishing system controlled with a baghouse followed by a cartridge type filter. The dry material handling in packaging area is controlled with two baghouses.
  - (1) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under State law only.
    - a. None.
    - (2) Applicable Emission Limitations and/or Control Requirements
- b) Applicable Emission 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 emission 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 Emission Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>The "wet end" emissions from this process shall be controlled by a flare (North Side Flare) or equivalent control device.</p> <p>The best available technology (BAT) determination for the flare shall be compliance with the requirements specified in 40 CFR 63.11(b). See b)(2)a. below.</p> <p>(Note: The North Side Flare also controls emissions unit P006 (K-3 Process Unit) at this facility).</p> <p>The "finishing end" emissions from this process shall be controlled by a catalytic oxidizer or equivalent control device and meet the emission limitations stated below. See b)(2)b. below.</p>



	Applicable Rules/Requirements	Applicable Emission Limitations/Control Measures
		<p>           Volatile organic compound (VOC) emissions from the "finishing end" shall not exceed 34.4 pounds per hour.         </p> <p>           Carbon monoxide (CO) emissions from the "finishing end" shall not exceed 14.7 pounds per hour and 64.0 tons per year. See f)(1)d. below.         </p> <p>           The BAT determination under this rule includes the requirement to operate and maintain the VOC Leak Detection and Repair Program (LDRP) developed for this process. See b)(2)c. below.         </p> <p>           The BAT determination under this rule includes the requirement to demonstrate compliance with the requirements of OAC rules 3745-31-05(D), 3475-17-07(A)(1), 3745-17-11(B)(Table I), 3745-21-07(M)(2), and 40 CFR Part 63, Subpart I.         </p> <p>           Also see. b)(2)d. below.         </p>
b.	OAC rule 3745-31-05(D) (Synthetic Minor to avoid New Source Review)	<p>           VOC emissions from the "finishing end" shall not exceed 39.0 tons, based upon a rolling, 12-month summation of the emissions.         </p> <p>           See b)(2)f. below.         </p>
c.	OAC rule 3745-31-05(E)	<p>           Particulate emissions (PE) from the "finishing end" shall not exceed 9.9 tons per year.         </p> <p>           See b)(2)f. below.         </p>
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	<p>           See b)(2)g. below.         </p>
e.	OAC rule 3745-17-07(A)(1)	<p>           Visible PE from any stack serving this emissions unit (other than the flare stack) shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.         </p>
f.	OAC rule 3745-17-11(B)(Table I) ("finishing end" emissions only)	<p>           PE shall not exceed 21.5 pounds per hour. See f)(1)h. below.         </p> <p>           Also see b)(2)h. below.         </p>



	Applicable Rules/Requirements	Applicable Emission Limitations/Control Measures
g.	OAC rule 3745-21-07(M)(2) (“wet end” emissions only)	Organic compound emissions shall be reduced by an overall control efficiency of at least 85%, by weight.  See b)(2)a, b)(2)c, and b)(2)d below.
k.	40 CFR Part 63, Subpart I	The permittee shall comply with the requirements of 40 CFR Part 63, Subpart H for the designated organic hazardous air pollutant emissions from the processes specified in 40 CFR 63.190(b)(1) as identified in 40 CFR Part 63, Subpart I.

(2) Additional Terms and Conditions

- a. When in operation, the flare (North Side Flare) used to control the “wet end” organic compound emissions from this process shall be operated in accordance with the applicable requirements specified in 40 CFR 63.11(b) to achieve a minimum control efficiency of 98%.
- b. When in operation, the catalytic oxidizer or equivalent control device used to control the “finishing end” VOC emissions from this process shall achieve a minimum control efficiency of 90%.
- c. The permittee shall maintain the VOC LDRP developed for this emissions unit in accordance with the revised plan submitted to Ohio EPA on May 25, 2004. The LDRP may be revised with the written approval of the Ohio EPA, Southeast District Office.
- d. All VOC emissions (excluding fugitive emissions) from the tank farm associated with the emissions unit, and the feed preparation, polymerization, blending and hydro-washing steps of elastomeric polymer production for this emissions unit shall be vented to the flare.

When the cyclone finishing system is in operation, all VOC emissions (excluding fugitive emissions) from the cyclone process dryer associated with this emissions unit shall be vented to a catalytic oxidizer or equivalent device. Nothing in this permit precludes the permittee from using a safety device when the permittee deems it to be necessary in order to avoid unsafe conditions. The cyclone process cooler vents directly to the atmosphere.

When the LMW finishing is in operation, VOC emissions are minimal and vented directly to the atmosphere.

- e. When the “finishing end” of this process is in operation, all PE from the product separation operations shall be routed to a cyclone, baghouse, and cartridge



filters or equivalent devices. In packaging area, all PE from the handling and transfer of dry materials shall be routed to baghouses or equivalent devices.

- f. This permit-to-install for this emissions unit takes into account voluntary restrictions (including the use of air pollution control equipment) as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3). Those restrictions on the emissions from the "finishing end" of this process include the use of either the controlled cyclone finishing system or the controlled LMW finishing system.
- g. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled nitrogen oxides (NOx) emissions from this emissions unit since the potential-to-emit for NOx is less than 10 tons per year.
- h. The hourly PE limitation for this emissions unit was established according to OAC rule 3745-17-11(B), Table I, and does not reflect the hourly potential-to-emit for the "finishing end" of the process.
- i. See the applicable requirements referenced in 40 CFR Part 63, Subpart I (40 CFR 63.190-193).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from each stack serving this emissions unit (other than the flare stack). The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal



operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare stack serving this emissions unit. If, during any weekly check, the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.
- (3) The permittee shall properly operate and maintain a device (including, but not limited to, a thermocouple, and ultraviolet beam sensor, or infrared sensor) capable of continuously detecting the presence of the flare's pilot flame. The monitoring device shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals with any modifications deemed appropriate by the permittee.
- (4) The permittee shall record the following information each day:
  - a. all periods during which the flare was not operating and emissions were vented to it;
  - b. all periods during which there was no pilot flame; and
  - c. the operating times for the flare and continuous monitoring equipment used to detect the presence of the flare's pilot flame.
- (5) The permittee shall properly operate and maintain a continuous hydrocarbon analyzer system (HCAS) to monitor and record the VOC emissions emitted from the catalytic oxidizer. The monitoring and recording devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals with any modifications deemed appropriate by the permittee.
- (6) The permittee shall maintain a written quality assurance/quality control plan for the HCAS. The plan shall address periodic gas calibration of the HCAS, calibration of the gas flow measuring device, critical spare parts, and maintenance procedures. The plan shall be consistent with manufacturer's recommendations and any modification deemed necessary by the permittee. The quality assurance/quality control plan and a logbook dedicated to the HCAS must be kept on site and available for inspection during regular business hours.
- (7) Excluding periods of HCAS downtime or failure, the VOC mass emission rate of the exhaust gases following the catalytic oxidizer, for any 3-hour block averaged when the cyclone finishing is in operation, shall not be more than the value, "Hmax", established during the most recent performance test that demonstrated the emissions unit was in compliance. "Hmax" shall be determined by the following equation:



$$H_{max} = 34.4 \times H_{test} / E_{test}$$

where:

$H_{test}$  = average VOC mass emission rate recorded by the HCAS during the most recent performance test that demonstrated the emissions unit was in compliance, in pounds per hour;

$E_{test}$  = average VOC emission rate measured using the methods specified in (1)f) during the most recent performance test that demonstrated the emissions unit was in compliance, in pounds per hour; and

34.4 = maximum allowable VOC mass emission rate from the "finishing end" of this process, in pounds per hour.

- (8) The permittee shall record the following:
- a. excluding periods of HCAS downtime or failure, the hourly VOC emissions emitted from the catalytic oxidizer serving the cyclone finishing system, in pounds per hour;
  - b. all 3-hour block average periods of time, when the cyclone finishing system is in operation, during which the VOC mass emission rate from the catalytic oxidizer exceeded " $H_{max}$ "; and
  - c. all periods of downtime or failure for the HCAS when the cyclone finishing system was in operation.
- (9) The permittee shall maintain monthly records of the following information:
- a. the total hours of operation of the LMW finishing system;
  - b. the total VOC emissions from the LMW finishing system, calculated by multiplying (a) times an emission factor of 0.8 pound per hour (engineering design estimate), in pounds;
  - c. the total monthly VOC emissions from the cyclone finishing system, calculated as the summation of each hourly VOC value from the records required in d)(8)a., in pounds;
  - d. the total monthly VOC emissions from the cyclone finishing system and the LMW finishing system, combined, in tons,  $[(b) + (c)] / 2000$  pounds per ton; and
  - e. the rolling, 12-month summation of the total VOC emissions, in tons (the total emissions for the current month plus the total emissions for the previous 11 calendar months).



The emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to demonstrate compliance with the rolling, 12-month emission limitation upon issuance of this permit.

- (10) A monitoring log shall be maintained in accordance with the requirements of the VOC LDRP plan specified in b)(2)c. of these terms and conditions. The monitoring log shall be retained for a minimum of 2 years after the date on which the record was made or the report using the monitoring record was prepared. A copy of the monitoring log shall be made available to the Director or an authorized representative of the Director, upon verbal or written request, at any reasonable time.
- (11) See the applicable monitoring and recordkeeping requirements referenced in 40 CFR Part 63, Subpart I (40 CFR 63.190-193).

e) Reporting Requirements

- (1) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from any stack serving this emissions unit while in operation and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions.
- (2) As part of the VOC LDRP specified in b)(2)c. of these terms and conditions, the permittee shall submit semiannual written reports that (a) specify the total number of components which were found leaking during the previous 6 months that were not repaired within 15 days and (b) identify all leaking components which cannot be repaired until the next process unit turnaround.

The semiannual reports shall be submitted to the Ohio EPA, Southeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

- (3) The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare serving this emissions unit while in operation and (b) include all visible emission readings conducted pursuant to the procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare.
- (4) The permittee shall submit quarterly summaries that include a log of the downtime or failure for the capture (collection) system, control device(s), and associated monitoring equipment, when the emissions unit was in operation.
- (5) The permittee shall submit deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period, as well as the cause for each such deviation.
- (6) The permittee shall submit deviation (excursion) reports that identify the following:
  - a. all 3-hour block periods of time that exceeded the 34.4 pounds per hour VOC emission limitation from the “finishing end” of this process; and



- b. any rolling, 12-month summation exceedance of the 39 tons per year VOC emission limitation from the “finishing end” of this process.

The deviation (excursion) reports shall be submitted in accordance with Standard Terms and Conditions of this permit.

- (7) See the applicable reporting requirement(s) referenced in 40 CFR Part 63, Subpart I (40 CFR 63.190-193). The reports required by this Subpart and other Subparts referenced therein, if any, shall be submitted in accordance with the schedule prescribed by the Subparts, and this permit shall not be construed as requiring the submittal of additional or duplicate reports related to 40 CFR Part 63, Subpart I or other Subparts referenced therein, on a different schedule.

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall conduct, or have conducted, emission tests to demonstrate compliance with this emission limitation. Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

Also see f)(2) below.

- b. Emission Limitation:

When in operation, the flare (North Side Flare) used to control the “wet end” organic compound emissions from this process shall be operated in accordance with the applicable requirements specified in 40 CFR 63.11(b) to achieve a minimum control efficiency of 98%.

Applicable Compliance Method:

The flare compliance demonstration required by 40 CFR Part 63.11(b) was demonstrated through a test performed by the permittee and witnessed by the Ohio EPA on June 1, 2006. The test results indicated that the average heating value of the flare gas stream was 565 Btu/standard cubic foot and the gas velocity averaged 12.1 feet per second. The calculated Vmax is 122 feet per second based on the flare gas stream composition at the time of the test.



If required, the net heating value of the gas being combusted in the open flare and the actual gas exit velocity shall be calculated in accordance with the equations specified in 40 CFR Part 63.11(b).

c. Emission Limitation:

When in operation, the catalytic oxidizer or equivalent control device used to control the "finishing end" VOC emissions from this process shall achieve a minimum control efficiency of 90%.

Applicable Compliance Method:

If required, the permittee shall conduct, or have conducted, emission tests to demonstrate compliance with this emission limitation. Compliance with this emission limitation shall be demonstrated in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25 or 25A, as appropriate, or other approved U.S. EPA VOC test methods. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall either be determined by testing the gas streams entering and leaving the control device or, if appropriate, the amount of VOC employed shall be measured and the gas stream leaving the control device shall be tested. If the VOC emissions entering and leaving the control device are determined in accordance with the test methods 25 or 25A, the mass emissions of VOC as carbon shall be used in the efficiency determination.

Also see f)(2) below.

d. Emission Limitation:

CO emissions from the "finishing end" shall not exceed 14.7 pounds per hour.

Applicable Compliance Method:

This emission limitation was established based upon the maximum designed flow rate of the catalytic oxidizer and manufacturer's data on CO emission rates.

If required, the permittee shall conduct, or have conducted, emission tests to demonstrate compliance with this emission limitation. Compliance with this emission limitation shall be demonstrated in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

Also see f)(2) below.

e. Emission Limitation:

CO emissions from the "finishing end" shall not exceed 64.0 tons per year.

Applicable Compliance Method:

This emission limitation was established by multiplying the hourly CO emission rate by 8,760 hours per year, then dividing by 2000 pounds per ton.



Compliance with this emission limitation may be assumed provided that the permittee complies with the hourly CO emission limitation.

f. Emission Limitation:

VOC emissions from the "finishing end" shall not exceed 34.4 pounds per hour.

Applicable Compliance Method:

Compliance with this emission limitation may be demonstrated based upon the monitoring and recordkeeping specified in d)(7) above.

If required, the permittee shall conduct, or have conducted, emission tests to demonstrate compliance with this emission limitation. Compliance with this emission limitation shall be demonstrated in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25 or 25A, as appropriate, or other approved U.S. EPA VOC test methods.

Also see f)(2) below.

g. Emission Limitation:

VOC emissions from the "finishing end" shall not exceed 39.0 tons, based upon a rolling, 12-month summation of the emissions.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and recordkeeping specified in d)(8) above.

h. Emission Limitations:

PE from the "finishing end" shall not exceed 21.5 pounds per hour and 9.9 tons per year.

Applicable Compliance Methods:

The "finishing end" uses either of the following finishing systems and the specified controls to comply with the particulate emission limitations:

the cyclone finishing system with:

<u>Control Equipment</u>	<u>Design Control Efficiency</u>
baghouse (S-9249) and cartridge type filter (S-9250)	99%
baghouse (S-9258) and cartridge type filter (S-9260)	99%
integral cyclone (B-9244)	0.01 pound per hour

or the LMW finishing system with:



<u>Control Equipment</u>	<u>Design Control Efficiency</u>
baghouse (S-9383) and cartridge type filter (S-9385)	99%

and, the packaging area with:

<u>Control Equipment</u>	<u>Design Control Efficiency</u>
baghouse (B-9297)	99.9 %
baghouse (B-9298)	99.9 %

Note: The total PE from this emissions unit currently includes 9.6 tons per year of uncontrolled PE contributed by catalyst loss from the catalytic oxidizer.

The annual PE limitation was established by assuming that the worst-case scenario is operating the "finishing end" of the process with the cyclone finishing system and packaging area for 8,760 hours per year.

Compliance with the annual emission limitation may be demonstrated using the following equations:

$$TE = [C + P] / 2000 \text{ pounds per ton}$$

where:

TE = total annual emissions, in tons per year;

C = annual emissions from the "finishing end" cyclone system, in pounds per year; and

P = annual emissions from the packaging area, in pounds per year.

For the "finishing end" cyclone system:

$$C = [(T + Cx) * SF] * H$$

where:

C = annual emissions from the "finishing end" cyclone system, in pounds per year;

T = emission rate from the product separation cyclone, baghouses, and filters, based upon their maximum design emission rates = 0.03 pound per hour;

Cx = emission rate from the catalytic oxidizer based on previous test data = 1.9 pounds per hour;

SF = safety factor = 1.15 (15%); and

H = hours of operation for the "finishing end" cyclone system = 8,760 hours per year.

For the packaging end:

$$P = ER * B * H$$



where:

P = annual emissions from the packaging area, pounds per year;  
ER = emission rate from each baghouse, based upon their maximum design emission rates = 0.01 pound per hour;  
B = number of baghouses in packaging area = 2; and  
H = hours of operation for the packaging area = 8,760 hours per year.

In addition, emission testing may be required to confirm the control device design emission rates and/or tested emission rate used in the equations above in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 or other approved U. S. EPA test methods.

The hourly PE limitation was established based upon OAC rule 3745-17-11(B), Table I.

Compliance with the hourly emission limitation may be demonstrated based upon the information in the equations stated above. If required, the permittee shall conduct, or have conducted, emission tests to demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

Also see f)(2) below.

i. Emission Limitation:

As required in 40 CFR Part 63, Subpart A and referenced in 40 CFR Part 63, Subpart H, there shall be no visible emissions from the open flare serving this emissions unit, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

Applicable Compliance Method:

If required, the permittee shall conduct, or have conducted, emission tests to demonstrate compliance with this emission limitation. Compliance with this emission limitation shall be demonstrated through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22.

Also see f)(2) below.

j. Emission Limitation:

Organic compound emissions shall be reduced by an overall control efficiency of at least 85%, by weight.

Applicable Compliance Method:

An overall reduction of at least 85%, by weight, for all organic compounds from the "wet end" of the process associated with this emissions unit is achieved by



capturing all volatile organic compounds (excluding fugitive emissions) using a closed vent system in accordance with b)(1)k. above (40 CFR Part 63 Subpart H, §63.172), and controlling the volatile organic compound emissions with a flare operated in accordance with b)(2)a. above ( $\geq 98\%$  control efficiency).

- (2) If emission testing is required for any of the specified emission limitations above, the testing shall be conducted in accordance with the following requirements:

The emission tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Southeast District Office. Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods, the emissions unit operating parameters, the times and dates of the tests, and the persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emission tests.

Personnel from the Ohio EPA shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office within 30 days following the completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

- (3) See the applicable testing requirements referenced in 40 CFR Part 63, Subpart I (40 CFR 63.190-193).

g) **Miscellaneous Requirement**

- (1) The terms and conditions of this permit supersede those contained in Permit-to-Install 06-08260 issued on August 12, 2007.