



SAI GLOBAL
ISO 14001
Environmental
(1628502)

September 1, 2015

CERTIFIED MAIL
RECEIPT REQUESTED

[Article Number 7013 1090 0000 8057 8317]
Ohio Environmental Protection Agency, SEDO DAPC
ATTN Chad Ferguson
2195 Front St.
Logan, OH 43138

RE: FACILITY ID NO.: 06-84-01-0011
EMISSIONS UNITS: B005 and B007

Dear Mr. Ferguson:

This letter is to inform you that, as of August 31, 2015, the two coal-fired emissions units at Kraton Polymers (B005 and B007) are permanently shut down and removed from service. It is the understanding of Kraton Polymers that authorization to operate the affected units has ceased as of August 31, 2015 and the permittee shall not be required to meet any Title V permit requirements applicable to these emissions units, except for any residual requirements, such as the quarterly deviation reports and annual compliance certification covering the period during which the emissions units last operated.

Please call Danielle Axson at 740-423-2468 if you should have any questions regarding this information.

Based on information and belief formed after reasonable inquiry, I certify that all factual statements in this transmittal are true, accurate and complete to the best of my knowledge.

Sincerely,

Scott Oran
Site Manager

cc: Ohio Environmental Protection Agency
Department of Air Pollution Control
Lazarus Government Center
ATTN Jennifer Van Vlerah
P.O. Box 1049
Columbus, OH 43216-1049

United States Environmental Protection Agency
Region V
Air and Radiation Division
ATTN Director
77 West Jackson Blvd.
Chicago, IL 60604-3590



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

1/15/2013

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: P0108853
Permit Type: Initial Installation
County: Washington

Certified Mail

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

How to give us feedback on your permitting experience

Please complete a survey at 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 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

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:	P0108853, Permit-To-Install - Initial Installation
A public notice and proposed hearing date for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in The Marietta Times on 11/15/2012. The comment period ended on 12/21/2012.	
Hearing date (if held)	12/19/2012
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: Permit revisions requested by Kraton**

a. Comment:

On November 27, 2012, Kraton provided comments on the draft PTI for the two new boilers.

b. Response:

Ohio EPA's response to Kraton's comments on the draft PTI was provided to the company in correspondence dated December 28, 2012.

2. **Topic: Safety issues**

a. Comment:

One of the two commenters expressed concerns about the general dangers at the Kraton facility, both to workers and village residents, and noted the need for substantial safety training to work at the plant. Another commenter noted that the Kraton facility has experienced numerous explosions the company characterizes as "a loud ignition," and other releases that



management has not properly reported or addressed.

b. Response:

When issuing installation permits for new sources of air contaminants, Ohio EPA's Division of Air Pollution Control (DAPC) does not evaluate the safety of the proposed equipment. The federal Occupational Safety and Health Administration (OSHA) has jurisdiction over safety issues at the Kraton facility, and safety concerns should be directed to that agency. Any malfunctions of air contaminant sources or control equipment must be reported to Ohio EPA as required by the company's air permit, and the permit also requires that processes be shut down if malfunctions of air pollution control equipment cannot be addressed promptly.

3. Topic: Impacts to property and the local environment

a. Comment:

One commenter noted that trees and animals have died from the stuff put out by Kraton, and that clothes left on lines to dry turn black.

b. Response:

DAPC's purpose in reviewing new source installation plans and issuing installation permits for new air contaminant sources is to ensure that the proposed equipment meets all state and federal air pollution control laws and rules. Those state and federal laws and rules are established based on ensuring adequate protection of human health and the environment. For substantial increases in pollutant emissions from a facility, companies are required to implement best available control technology and perform air dispersion modeling to ensure that the new installation does not adversely impact the quality of the ambient air in the area.

4. Topic: Data collection concerns and compliance assurance issues

a. Comment:

One commenter noted problems with the existing coal-fired boilers and the company's manipulation of the data currently being collected to demonstrate that those sources comply with their air permits. A lack of confidence in the company's commitment to compliance assurance was expressed.

b. Response:

The final PTI contains substantial monitoring, recordkeeping and reporting requirements that the company must comply with to demonstrate compliance with the emissions limitations and other operational restrictions established in the permit for the new boilers. That includes the use of continuous emissions monitoring systems (CEMS) for compliance with the emissions limitations for nitrogen oxides (NO_x). The company is subject to substantial quality control requirements for its NO_x CEMS, including the requirement to certify the monitor and perform quarterly and annual quality assurance/quality control checks. All data collected to comply with the permit must be made available for inspection by Ohio EPA or U.S. EPA upon request, and the company is subject to full compliance evaluation inspections every other year. Some of the emissions limitations in Kraton's PTI are set at the maximum potential of the equipment, so no monitoring and recordkeeping are required for those pollutants because the maximum levels are protective



of federal air quality standards.

5. Topic: Belpre naphtha (BN), fuel firing concerns and use of new boilers as incinerators for “alternate fuels”

a. Comment:

One commenter expressed concern about the firing of BN, an alternate fuel that used to be handled as a regulated hazardous waste. Problems with spills and releases of Belpre naphtha and the alternate fuel balancing of the existing boilers (how the various fuels are fired) were also identified. A concern was expressed that if the new boilers are going to be used as incinerators to dispose of its “alternate fuels” that were formerly managed as hazardous waste, this could be a problem based on how they appear to be mismanaging the existing systems.

b. Response:

BN is a byproduct of Kraton’s polymer manufacturing process, and is considered a comparable fuel in federal and state hazardous waste regulations if it meets the qualifying criteria for comparable fuels in 40 CFR §261.38 “Exclusion of comparable fuel and syngas fuel.” As a comparable fuel, BN is excluded from classification as a solid waste in federal RCRA rules, and since it is not a waste, the BN is not considered a hazardous waste. For additional information on the comparable fuels exclusion as it applies to Kraton, Ohio EPA’s Division of Materials and Waste Management (DMWM), Southeast District Office (SEDO) should be contacted.

The purpose of the new boiler project is to phase out and shut down the existing coal fired boilers (EUs B005 and B006). Once the new natural-gas fired boilers are installed and become operational, the PTI requires that the company cease operation of the older boilers.

6. Topic: Kraton’s handling of emergency releases

a. Comment:

A commenter expressed concerns with Kraton’s response to releases to both air and surface water, and actions taken by management that required employees to cover up the release incidents.

b. Response:

As identified in the response to Item #3, above, the final air permit for the new boilers requires substantial monitoring and recordkeeping, and also contains the rule requirement that any malfunctions be immediately reported and addressed. Release reporting and response is handled by Ohio EPA’s Division of Environmental Response and Revitalization (DERR), and the final air permit being issued to Kraton does not cover any of the regulations under DERR’s jurisdiction.

7. Topic: Wastewater and contamination cleanup issues

a. Comment:

Issues with improper wastewater handling and failure to address several contaminated areas onsite were raised by one commenter.



b. Response:

The company's handling of its wastewater and remediation of contaminated areas is outside of the scope of the PTI for the two new boilers proposed at Kraton. When PTI applications are processed by DAPC, Ohio law requires that the Division coordinate with other Ohio EPA divisions to ensure that a proposed project does not violate any other federal or state environmental laws. No other EPA divisions requested coordination on this permit, but SEDO's Division of Surface Water has been made aware of the commenter's concerns related to wastewater management. Similarly, Ohio EPA's cleanup program is handled by DERR, and the commenter's concern related to needed cleanup at the site has been referred to that division.



FINAL

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

Facility ID:	0684010011
Permit Number:	P0108853
Permit Type:	Initial Installation
Issued:	1/15/2013
Effective:	1/15/2013



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: P0108853
Facility ID: 0684010011
Effective Date: 1/15/2013

Authorization

Facility ID: 0684010011
Facility Description: Thermoplastic elastomer manufacturing facility
Application Number(s): A0041912, A0045481
Permit Number: P0108853
Permit Description: Installation of two new 249 mmBtu/hr natural gas, distillate oil, and belpre naphtha-fired boilers to replace two existing coal, distillate oil, and belpre naphtha-fired boilers (B005 and B007).
Permit Type: Initial Installation
Permit Fee: \$2,000.00
Issue Date: 1/15/2013
Effective Date: 1/15/2013

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.

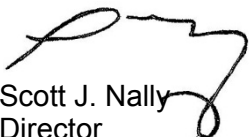
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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



Authorization (continued)

Permit Number: P0108853
 Permit Description: Installation of two new 249 mmBtu/hr natural gas, distillate oil, and belpre naphtha-fired boilers to replace two existing coal, distillate oil, and belpre naphtha-fired boilers (B005 and B007).

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

Group Name: GON-fired boilers

Emissions Unit ID:	B010
Company Equipment ID:	F-2001
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	B011
Company Equipment ID:	F-2002
Superseded Permit Number:	
General Permit Category andType:	Not Applicable



Final Permit-to-Install
Kraton Polymers U.S. LLC
Permit Number: P0108853
Facility ID: 0684010011
Effective Date: 1/15/2013

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: P0108853
Facility ID: 0684010011
Effective Date: 1/15/2013

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.
2. Emissions units B010 and B011 contained in this permit are subject to 40 CFR Part 60, Subpart Db and 40 CFR Part 63, Subpart JJJJJJ. The complete NSPS and MACT requirements, including the NSPS and MACT General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulation (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Southeast District Office.
3. The facility will be a major source of HAP emissions at the time of permit issuance. The requirements of either 40 CFR Part 63, Subpart DDDDD or Subpart JJJJJJ will be applicable to the new emissions units, depending upon the major or area source status of the facility for HAPs emissions at the first substantive compliance date of 40 CFR Part 63, Subpart DDDDD.
4. If applicable, the permittee shall 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") no later than the date on which a regulated substance is first present above a threshold quantity in a process.
5. VOC emissions from the G1 process unit (emissions unit P004) that are currently combusted in the coal-fired boilers (EUs B005 and B007) will be combusted in a new regenerative thermal oxidizer (RTO) after the coal-fired boilers are permanently shut down. Thus, emissions increases from the RTO installation project have been included in the net emissions increase analysis of the boiler installation project.



Final Permit-to-Install
Kraton Polymers U.S. LLC
Permit Number: P0108853
Facility ID: 0684010011
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C. Emissions Unit Terms and Conditions



1. Emissions Unit Group -- Natural Gas/Distillate Oil/Belpre Naphtha-fired boilers: B010, B011

EU ID	Operations, Property and/or Equipment Description
B010	249 million BTU/hour boiler equipped with low-NO _x burners and flue gas recirculation (FGR), as needed, burning natural gas or distillate oil with less than 0.05 percent sulfur, by weight, and co-firing up to a maximum physical capacity of 54.8 million BTU/hour Belpre naphtha
B011	249 million BTU/hour boiler equipped with low-NO _x burners and FGR, as needed, burning natural gas or distillate oil with less than 0.05 percent sulfur, by weight, and co-firing up to a maximum physical capacity of 54.8 million BTU/hour Belpre naphtha

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) b)(2)e. and g)(1)

b) Applicable Emission Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emission limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emission Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	<p>Carbon monoxide (CO) emissions shall not exceed 0.075 pound per million BTU of actual heat input when firing only natural gas or natural gas in combination with Belpre naphtha.</p> <p>CO emissions shall not exceed 0.036 pound per million BTU of actual heat input when firing only distillate oil or distillate oil in combination with Belpre naphtha.</p> <p>CO emissions shall not exceed the emissions limitations calculated pursuant to the following equation for any other fuel combination:</p> $E_C = \frac{0.075(H_G) + 0.036(H_O) + 0.075(H_{BN})}{H_G + H_O + H_{BN}}$ <p>Where:</p>



	Applicable Rules/Requirements	Applicable Emission Limitations/Control Measures
		<p>E_c = CO emissions limit in pound per million BTU.</p> <p>CO emissions shall not exceed 81.80 tons per rolling, 12-month period.</p> <p>See b)(2)a. and b. and f)(1)a. below.</p>
b.	ORC 3704.03(T)	<p>See c)(1) below.</p> <p>The requirements of this rule include compliance with OAC rules 3745-31-10 through 20 for CO, OAC rule 3745-110-03 and 40 CFR Part 60, Subpart Db for nitrogen oxides (NO_x) and 40 CFR Part 63, Subpart JJJJJJ, Table 1 and OAC rule 3745-17-10 for particulate matter (PM) emissions and particulate emissions (PE).</p>
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c. and c)(1) below.
d.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)d. below.
e.	<p>OAC rule 3745-110-03(C) and 40 CFR Part 60, Subparts A and Db (40 CFR 60.1-19 and 60.40b–60.49b)</p> <p>[In accordance with 40 CFR 60.40b(a), this emissions unit is a steam generating unit that commences construction, modification or reconstruction after July 19, 1984 and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million BTU per hour (MMBTU/hr))]</p>	<p>Nitrogen oxides (NO_x) emissions shall not exceed 0.10 pound per million BTU when firing only natural gas;</p> <p>NO_x emissions shall not exceed 0.12 pound per million BTU when firing only distillate oil; and</p> <p>NO_x emissions shall not exceed the emissions limitations calculated pursuant to the following equation:</p> $E_n = \frac{0.10H_G + 0.12H_O + 0.40H_{BN}}{H_G + H_O + H_{BN}}$ <p>Where: E_n = NO_x emission limit (expressed as NO₂), (pound per million BTU).</p> <p>See b)(2)e.-g. and f)(1)d. below.</p>
f.	OAC rule 3745-18-06(D)	Sulfur dioxide (SO ₂) emissions shall not exceed 1.6 pounds per million BTU of actual heat input when distillate oil is



	Applicable Rules/Requirements	Applicable Emission Limitations/Control Measures
		fired.
g.	OAC rule 3745-17-10(B)(1) and (C)(1)	<p>Particulate emissions (PE) shall not exceed 0.02 pound per million BTU of actual heat input when only natural gas and/or distillate oil is fired.</p> <p>The emission limitation specified by paragraph (C)(1) of this rule is less stringent than the emission limitations for PE established pursuant to 40 CFR Part 63, Subpart JJJJJJ when natural gas and/or distillate oil is co-fired with Belpre naphtha.</p>
h.	<p>OAC rule 3745-17-07(A) and 40 CFR Part 60, Subparts A and Db (40 CFR 60.1-19 and 60.40b–60.49b)</p> <p>[In accordance with 40 CFR 60.40b(a), this emissions unit is a steam generating unit that commences construction, modification or reconstruction after July 19, 1984 and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million Btu per hour (MMBtu/hr))]</p>	<p>When firing natural gas or when co-firing natural gas and Belpre naphtha, visible PE from the stack shall not exceed twenty percent opacity, as a six-minute average, except for a period of six consecutive minutes in any sixty minutes. Visible PE shall not exceed sixty percent opacity, as a six-minute average, at any time.</p> <p>When firing distillate oil or when co-firing distillate oil with any other fuel, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43b(f)]</p>
i.	<p>40 CFR Part 63, Subpart JJJJJJ (40 CFR 63.11193-11237)</p> <p>[In accordance with 40 CFR 63.11194(a)(2) and 63.11200, this emissions unit is a new industrial boiler located at an area source of HAPs in the oil subcategory.]</p>	<p>New oil-fired boilers with heat input capacities of 10 million BTU per hour or greater must achieve less than or equal to the following emission limit, except during periods of startup and shutdown:</p> <p>Particulate matter (PM) emissions shall not exceed 0.03 pound per million BTU of actual heat input when natural gas and/or distillate oil is co-fired with Belpre naphtha. [40 CFR 63.11201(a) and Table 1 of Subpart JJJJJJ of Part 63]</p>



	Applicable Rules/Requirements	Applicable Emission Limitations/Control Measures
		The permittee shall comply with the requirements of 40 CFR Part 63, Subpart JJJJJJ upon startup.
j.	40 CFR Part 63, Subpart A (40 CFR 63.11235)	Table 8 of 40 CFR Part 63, Subpart JJJJJJ specifies the provisions of Subpart A that apply to owners and operators of affected facilities subject to this subpart.

(2) Additional Terms and Conditions

- a. The permittee shall employ best available control technology (BACT) for CO emissions from this emissions unit. BACT has been determined to be use of good combustion practices along with clean fuels, as detailed in the permittee's application and compliance with the following emission limitations:
 - i. when firing only natural gas or natural gas in combination with Belpre naphtha, 0.075 pound of CO per million BTU;
 - ii. when firing only distillate oil or distillate oil in combination with Belpre naphtha, 0.036 pound of CO per million BTU;
 - iii. when firing any other fuel combination, the CO emissions limitation calculated pursuant to the equation in b)(1)a.; and
 - iv. for all fuel types, 81.80 tons of CO per rolling, 12-month period.

- b. Installation and operation of the emissions units included in this PTI (EUs B010 and B011) is contingent upon the permanent shutdown of Boiler F-1001 (EU B005) and Boiler F-1002 (EU B007), two existing 247 million BTU per hour coal, #2 fuel oil, and Belpre naphtha fired boilers, once EUs B010 and B011 become operational. Pursuant to OAC rule 3745-31-01(TTT)(3)(f), a replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed one hundred eighty days. The net change in emissions as a result of this equipment shutdown and installation is as follows:

Pollutant	PSD Significant Emission Rates (TPY)	Increases - EUs B010, B011 and P004 (TPY) (Subject to PSD in Step 1 (Y/N)?)	Decreases – EUs B005 and B007 shutdown (TPY)*	Additional potential emissions increases within contemporaneous period (TPY)	Additional actual emissions decreases within contemporaneous period (TPY)	Net Change in Emissions (TPY) (Subject to PSD after Step 2 (Y/N)?)
CO	100	163.99 (Y)	-38.86 (11/03-10/05)	7.78	-0.47	132.44 (Y)



Pollutant	PSD Significant Emission Rates (TPY)	Increases - EUs B010, B011 and P004 (TPY) (Subject to PSD in Step 1 (Y/N)?)	Decreases – EUs B005 and B007 shutdown (TPY)*	Additional potential emissions increases within contemporaneous period (TPY)	Additional actual emissions decreases within contemporaneous period (TPY)	Net Change in Emissions (TPY) (Subject to PSD after Step 2 (Y/N)?)
NO _x	40	392.83 (Y)	-705.15 (2/06-1/08)	25.04	-2.15	-289.43 (N)
PE/PM	25	32.76 (Y)	-143.19 (8/05-7/07)	1.51	-0.15	-109.07 (N)
PM ₁₀	15	15.96 (Y)	-53.25 (8/05-7/07)	1.51	-0.15	-35.93 (N)
PM _{2.5}	10	15.96 (Y)	-30.25 (8/05-7/07)	1.51	-0.15	-12.93 (N)
SO ₂	40	111.24 (Y)	-3,371.80 (11/04-10/06)	2.58	-0.14	-3,258.12 (N)
CO ₂ e	75,000	357,522 (Y)	-315,240 (11/04-10/06 for CO ₂ and 10/06-9/09 for CH ₄ and N ₂ O)	1,439.59	-79.23	43,642.36 (N)
VOC	40	11.59 (N)	N/A	N/A	N/A	N/A

* Based on baseline actual emissions during the years specified

As a result of the net change in emissions below the PSD significant emission rates, the proposed new source installation project is only a major modification for CO, and the permittee has "netted out" of Prevention of Significant Deterioration (PSD) requirements for NO_x, PE, PM₁₀, PM_{2.5}, SO₂ and CO₂e emissions.

- c. The permittee has satisfied the BAT requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than ten tons per year. However, that rule revision has not yet been approved by the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revision to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once the U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, these emission limitations/control measures no longer apply.
- d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the SIP.



The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM₁₀, and PM_{2.5}, and VOC emissions from this air contaminant source since the uncontrolled potential-to-emit for PM₁₀ and PM_{2.5}, and VOC emissions is less than 10 tons per year.

- e. On May 12, 2011, Ohio's NO_x RACT rule, OAC Chapter 3745-110, became effective. However, this rule has not yet been approved by the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves OAC Chapter 3745-110, the requirements of this rule will be enforceable under state law only.
- f. Each continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system) shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3. At least 45 days before commencing certification testing of the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO_x and CO₂ or O₂ emissions from the continuous monitors, in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system) must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- g. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

c) Operational Restrictions

- (1) The permittee shall burn only the fuels and combinations thereof in the following six fuel operating scenarios in this emissions unit:
 - a. natural gas (G);
 - b. a combination of natural gas and Belpre naphtha (G/BN);
 - c. ultra-low sulfur distillate oil (up to 0.05% S) (O);
 - d. a combination of ultra-low sulfur distillate oil (up to 0.05% S) and Belpre naphtha (O/BN);



- e. a combination of natural gas and ultra-low sulfur distillate oil (up to 0.05% S) (G/O); or
 - f. a combination of natural gas, ultra-low sulfur distillate oil (up to 0.05% S) and Belpre naphtha (G/O/BN).
- (2) See 40 CFR Part 63, Subpart JJJJJJ (40 CFR 63.11193-11237).
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) For each day during which the permittee burns a fuel other than natural gas, ultra-low sulfur distillate oil (up to 0.05%) or Belpre naphtha, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
 - (2) In order to accurately determine the heat input rates for this emissions unit, the permittee shall install, operate, and maintain equipment to continuously monitor and record the actual natural gas, distillate oil, and Belpre naphtha fuel flow rate to this emissions unit when the emissions unit is in operation.
 - (3) Prior to the installation of the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system), the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system) meets the requirements of Performance Specifications 2 and 3. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.
 - (4) The permittee shall install, operate, and maintain equipment to continuously monitor and record NO_x and CO₂ or O₂ emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60 and OAC rule 3745-110-05.
 - (5) The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system) including, but not limited to:
 - a. emissions of NO_x in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
 - b. emissions of NO_x in units of the applicable standard(s) in the appropriate averaging period, as follows:
 - i. From May through September of each year, when using as fuel natural gas only or distillate oil only, 24-hour daily heat input-weighted average for the limits in OAC rule 3745-110-03(C).



- ii. 30-day heat input-weighted average for the limits in NSPS Subpart Db; and for OAC rule 3745-110(C) for October through April of each year.
- c. the percent CO₂ or O₂ with each cycle time of the analyzer, with no resolution less than one data point per minute required;
- d. results of quarterly cylinder gas audits;
- e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- g. hours of operation of the emissions unit, continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system), and control equipment (if FGR is required);
- h. the date, time, and hours of operation of the emissions unit without the control equipment (if FGR is required) and/or the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system);
- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment (if FGR is required) and/or the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system); as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (6) The permittee shall obtain and maintain records of a certification from each oil supplier that indicates that each shipment of fuel oil delivered to the facility during the calendar year met the requirement of ultra-low sulfur distillate oil (up to 0.05% S).
 - (7) See 40 CFR Part 63, Subpart JJJJJJ (40 CFR 63.11193-11237).
 - (8) See 40 CFR Part 60, Subpart Db (40 CFR 60.40b–60.49b).
- e) Reporting Requirements
- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
 - (2) Simultaneous to beginning operation (following a reasonable shakedown period) of emissions units B010 and B011, the permittee shall submit a notification documenting the shutdown dates for emissions units B005 and B007.



- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, ultra-low sulfur distillate oil (up to 0.05% S) or Belpre naphtha was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system):
 - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_x emissions in excess of any applicable limit. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
 - b. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of continuous CO₂ or O₂ monitoring system downtime and malfunction while the emissions unit was on line.
 - c. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous NO_x and CO₂ or O₂ and other associated monitors;
 - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
 - v. the total NO_x emissions for the calendar quarter (tons);
 - vi. the total operating time (hours) of the emissions unit;



- vii. the total operating time of the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system) while the emissions unit was in operation;
- viii. results and dates of quarterly cylinder gas audits;
- ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_x and CO₂ or O₂ monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system), emissions unit, and/or control equipment (if FGR is required);
- xii. the date, time, and duration of any downtime** of the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system) and/or control equipment (if FGR is required) while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

*where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

**each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

(5) See 40 CFR Part 63, Subpart JJJJJJ (40 CFR 63.11193-11237).

(6) See 40 CFR Part 60, Subpart Db (40 CFR 60.40b–60.49b).

f) Testing Requirements

(1) Compliance with the emission limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitations:

CO emissions shall not exceed 0.075 pound per million BTU of actual heat input when firing only natural gas or natural gas in combination with Belpre naphtha.



CO emissions shall not exceed 0.036 pound per million BTU of actual heat input when firing only distillate oil or distillate oil in combination with Belpre naphtha. CO emissions shall not exceed the emissions limitations calculated pursuant to the following equation for any other fuel combination:

$$E_C = \frac{0.075(H_G) + 0.036(H_O) + 0.075(H_{BN})}{H_G + H_O + H_{BN}}$$

Where:

E_C = CO emissions limit in pound per million BTU;

H_G = Heat input from combustion of natural gas, in million BTU per hour;

0.075 = CO emissions factor for burning natural gas alone or with Belpre naphtha, in pounds of CO per million BTU of actual fuel input;

H_O = Heat input from combustion of distillate oil, in million BTU per hour;

0.036 = CO emissions factor for combustion of distillate oil, in pounds of CO per million BTU of actual fuel input; and

H_{BN} = Heat input from combustion of Belpre naphtha (byproduct), in million BTU per hour.

CO emissions shall not exceed 81.80 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the pound per million BTU emissions limitations shall be demonstrated based upon the testing requirements specified in f)(3).

Compliance with the annual emissions limitation shall be demonstrated by the following equation:

$$E_{CO} = 0.075 (H_G + H_{BN} + H_O) \times 1 \text{ ton}/2,000$$

Where:

E_{CO} = CO emissions, in tons per rolling, 12-month period;

H_G = Heat input from combustion of natural gas, in million BTU per rolling, 12-month period;

H_{BN} = Heat input from combustion of Belpre naphtha, in million BTU per rolling, 12-month period;

H_O = Heat input from combustion of distillate oil, in million BTU per rolling, 12-month period; and



0.075* = CO emissions factor for burning natural gas alone or with Belpre naphtha, in pounds of CO per million BTU of actual fuel input

* Note: even though the quantity of distillate oil burned must be tracked, the distillate oil EF is not required to calculate compliance with the rolling, 12-month emissions limitation because the limitation is based upon unit's maximum PTE, which can only be achieved if natural gas is fired 100% of the time.

- b. Emissions Limitation:
 NO_x emissions shall not exceed 0.10 pound per million BTU when firing only natural gas.

Applicable Compliance Method:

Initial compliance with the pound per million BTU emissions limitation shall be demonstrated based upon the testing requirements specified in f)(3). Continuing compliance shall be demonstrated based upon the NO_x CEMS and the monitoring and recordkeeping requirements specified in d)(5).

- c. Emissions Limitation:
 NO_x emissions shall not exceed 0.12 pound per million BTU when firing only distillate oil.

Applicable Compliance Method:

Initial compliance with the pound per million BTU emissions limitation shall be demonstrated based upon the testing requirements specified in f)(3). Continuing compliance shall be demonstrated based upon the NO_x CEMS and the monitoring and recordkeeping requirements specified in d)(5).

- d. Emissions Limitation:
 NO_x emissions shall not exceed the emissions limitations, in pound per million BTU, calculated pursuant to the following equation:

$$E_n = \frac{0.10H_G + 0.12H_O + 0.40H_{BN}}{H_G + H_O + H_{BN}}$$

Where:

E_n = NO_x emission limitation (expressed as NO₂), in pound per million BTU);

H_G = Heat input from combustion of natural gas, in million BTU per hour;

0.10 = NO_x emissions limitation for combustion of natural gas, in pound per million BTU (from the OAC rule 3745-110-03(B)(1));

H_O = Heat input from combustion of distillate oil, in million BTU per hour;

0.12 = NO_x emissions limitation for combustion of distillate oil, in pound per million BTU (from the OAC rule 3745-110-03(B)(1));



H_{BN} = Heat input from combustion of Belpre Naphtha (byproduct); and

0.40 = NO_x emissions limitation for combustion of Belpre naphtha, in pound per million BTU (from NSPS Subpart Db, 40 CFR 63.44b(e)).

Applicable Compliance Method:

Compliance shall be demonstrated based upon the NO_x CEMS and the monitoring and recordkeeping requirements specified in d)(5).

e. Emissions Limitation:

SO_2 emissions shall not exceed 1.6 pounds per million BTU of actual heat input when distillate oil is fired.

Applicable Compliance Method:

Compliance with the pound per million BTU emissions limitation is based upon the emission factor from AP-42, Table 1.3-1 (5/10) of 142S pounds of SO_2 per 1,000 gallons multiplied by the maximum allowable oil sulfur content of 0.05% divided by the minimum heat content of distillate oil of 140 million BTU/1,000 gallons.

If required, SO_2 emissions shall be determined according to test Methods 1 - 4, and 6 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

f. Emissions Limitations:

PE shall not exceed 0.02 pound per million BTU of actual heat input when only natural gas and/or distillate oil is fired.

PM emissions shall not exceed 0.03 pound per million BTU of actual heat input when natural gas and/or distillate oil is co-fired with Belpre naphtha.

Applicable Compliance Method:

Compliance with the pound per million BTU emissions limitation when firing natural gas is based upon the emission factor from AP-42, Table 1.4-2 (7/98) of 7.6 pounds of PE per million scf divided by the minimum heat content of natural gas of 1,020 BTU/scf.

Compliance with the pound per million BTU emissions limitation when firing distillate oil or distillate oil co-fired with Belpre Naphtha is based upon the emission factor from AP-42, Table 1.3-1 (5/10) of 2.0 pounds of PE per 1,000 gallons of distillate oil divided by the minimum heat content of distillate oil of 140 million BTU/1,000 gallons.

Compliance with the pound per million BTU emissions limitation when firing natural gas with distillate oil and/or with Belpre naphtha is based upon the emission factors from AP-42, Table 1.4-2 (7/98) of 7.6 pounds of PE per million scf divided by the minimum heat content of natural gas of 1,020 BTU/scf, and from AP-42, Table 1.3-1 (5/10) of 2.0 pounds of PE per 1,000 gallons of distillate



oil divided by the minimum heat content of distillate oil of 140 million BTU/1,000 gallons.

If required, particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources" and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

- g. **Emissions Limitations:**
When firing natural gas or when co-firing natural gas and Belpre naphtha, visible PE from the stack shall not exceed twenty percent opacity, as a six-minute average, except for a period of six consecutive minutes in any sixty minutes. Visible PE shall not exceed sixty percent opacity, as a six-minute average, at any time.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 9.

- h. **Emissions Limitation:**
When firing distillate oil or when co-firing distillate oil with any other fuel, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

Applicable Compliance Method:

Initial compliance with the visible emission limitation shall be demonstrated based upon the testing requirements specified in f)(3). Continuing compliance with the visible emissions limitation shall be demonstrated as required by 40 CFR 60.48b(a).

- (2) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system) in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3.

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.



Certification of the continuous NO_x monitoring system (including the associated continuous CO₂ or O₂ monitoring system) shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3 and ORC Section 3704.03(I).

Ongoing compliance with the NO_x emissions limitations shall be demonstrated through the data collected as required in the monitoring and recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

Ongoing compliance with the CO₂ or O₂ monitoring requirements contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the monitoring and record keeping section of this permit; and demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

(3) Performance testing shall be conducted as required in 40 CFR Part 60, Subpart Db pursuant to 40 CFR 60.46b(d)(7), Subpart A of 40 CFR Part 60, OAC rules 3745-31-10 through 20, and OAC rule 3745-110-05(A). The permittee shall conduct, or have conducted, emission testing for this emissions unit within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, as applicable, in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance with the emissions limitations specified in b)(1) for visible PE when distillate oil is burned, for CO (all fuel burning scenarios) and for NO_x when natural gas or distillate oil is burned.
- b. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
 - i. for visible PE, Method 9 of 40 CFR Part 60 Appendix A;
 - ii. for CO, Methods 1 through 4 and 10 of 40 CFR Part 60 Appendix A; and
 - iii. for NO_x, Methods 1 through 4 and 7, 7A, 7C, 7D or 7E of 40 CFR Part 60 Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- c. The test(s) for each pollutant shall be conducted while the emissions unit is operating at or near its maximum capacity, while burning representative fuel and/or combination of fuels, unless otherwise specified or approved by the Ohio EPA, Southeast District Office.

The initial compliance test for CO shall be conducted when using the following fuel or combination of fuels:



- i. Natural gas only; and
- ii. Natural gas in combination with Belpre naphtha; and
- iii. Distillate oil only; and
- iv. Distillate oil in combination with Belpre naphtha.

The initial compliance test for CO while burning either a combination of distillate oil and natural gas or a combination of distillate oil, natural gas and Belpre naphtha is not required unless:

- i. For a period of any 30 consecutive days, less than 50% of the total heat input for the emissions unit is from natural gas, the gas use was not affected by a natural gas curtailment, and the director has determined that it is reasonable to require an emissions test; or
- ii. For a period of 60 cumulative days in any rolling, 12-month period, less than 50% of the total heat input for the emissions unit is from natural gas, the gas use was not affected by a natural gas curtailment, and the director has determined that it is reasonable to require an emissions test; or
- iii. The director has reason to believe that the CO emissions are either causing an endangerment to public health, or are likely to cause an endangerment to public health in the near future.

The initial compliance test for NO_x shall be conducted when using the following fuel or combination of fuels:

- i. Natural gas only; and
- ii. Distillate oil only.

The initial compliance test for visible PE shall be conducted when using the following fuel or combination of fuels:

- i. Distillate oil only.

- d. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emission test(s).
- e. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the



testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- f. A comprehensive written report on the results of the emission test(s) 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 completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.
- (4) Initial performance testing shall be conducted as required in 40 CFR Part 63, Subpart JJJJJJ pursuant to 40 CFR 63.11210, as applicable, and Subpart A of 40 CFR Part 63 Subpart A. The permittee shall conduct, or have conducted, emission testing for this emissions unit not later than 180 days after initial startup of such facility in accordance with the following requirements:
- a. The emission testing shall be conducted to demonstrate compliance with the applicable PE emission limitation specified in b)(1).
 - b. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PE, Methods 1 through 5 of 40 CFR 60 Appendix A;

Alternative test methods may be used subject to approval by the Administrator.
 - c. The test(s) shall be conducted in accordance with 40 CFR 63.11212 and Table 4 of Subpart JJJJJJ.
 - d. Prior to conducting a performance testing required by this section, the owner or operator must prepare and submit a site-specific test plan meeting the requirements in 40 CFR 63.7(c). In addition, no later than sixty (60) days prior to the proposed test date(s), 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 and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emissions test(s).
 - e. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - f. A comprehensive written report on the results of the emission test(s) 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 completion of the



test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

- g. The permittee shall conduct all subsequent performance tests required by 40 CFR 63.11220 on a triennial basis. Triennial performance tests must be completed no more than 37 months after the previous performance test.

g) **Miscellaneous Requirements**

- (1) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because (1) ORC 3704.03(F)(4)(f)(i) excludes air contaminant sources that emit air contaminants solely from the combustion of fossil fuels so the statute does not apply when natural gas and/or distillate oil is fired, and (2) the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, from burning emissions from the G1 process (EU P004) in a new RTO will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified PTI prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.