



State of Ohio Environmental Protection Agency

STREET ADDRESS:

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Columbus, Ohio 43215

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

8/5/2008

Certified Mail

Jason Patrick  
Sunoco Inc (R&M)  
1019 Haverhill-Ohio Furnace Road  
Haverhill, OH 45636-0127

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL  
Facility ID: 0773000080  
Permit Number: 07-00543  
Permit Type: Admin mod  
County: Scioto

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

Dear Permit Holder:

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

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

and Portsmouth City Health Dept., Air Pollution Unit  
605 Washington Street  
3rd Floor  
Portsmouth, OH 45662

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Portsmouth City Health Dept., Air Pollution Unit at (740)353-5156.

Sincerely,

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

Cc: U.S. EPA  
Portsmouth; Kentucky; West Virginia

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



PUBLIC NOTICE  
Issuance Of Draft Air Pollution Permit-To-Install  
Sunoco Inc (R&M)

Issue Date: 8/5/2008

Permit Number: 07-00543

Permit Type: Admin mod

Permit Description: Administrative modification to allow for the use of AP-42 emission factors for natural gas combustions in B004, B005, B006 and B010 along with minor changes to B006 terms and conditions.

Facility ID: 0773000080

Facility Location: Sunoco Inc (R&M)  
1019 Haverhill-Ohio Furnace Road,  
Haverhill, OH 45636-0127

Facility Description: Petrochemical Manufacturing

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio, has issued a draft action of an air pollution control permit-to-install (PTI) for an air contaminant source at the location identified above on the date indicated. Installation of the air contaminant source may proceed upon final issuance of the PTI. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Cindy Charles at Portsmouth City Health Dept., Air Pollution Unit, 605 Washington Street 3rd Floor or (740)353-5156. The permit can be downloaded from the Web page: [www.epa.state.oh.us/dapc](http://www.epa.state.oh.us/dapc)





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

Sunoco Inc. (R&M) is a chemical manufacturing facility. Sunoco proposes to physically modify 2001-UC utility boiler to allow for the simultaneous burning of heavy hydrocarbon (HHC) and light hydrocarbon (LHC) by-product hazardous waste fuels. The modification will result in more efficient steam production while firing by-product hazardous wastes. Sunoco proposes to establish synthetic minor emission limits on the four other boilers that may fire by-product hazardous waste fuel to restrict the PTE of the project to avoid PSD.

3. Facility Emissions and Attainment Status:

Sunoco Inc. (R&M) is located in Scioto County, which is an attainment area for all criteria pollutants with exception to particulate matter less than 2.5 microns (PM-2.5). This is an existing facility with potential emissions greater than 100 tons per year for particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds.

4. Source Emissions:

Potential annual emissions of Nitrogen Oxides (NO<sub>x</sub>), Sulfur Dioxides (SO<sub>2</sub>), Carbon Monoxide (CO), Particulate Matter, Particulate Matter less than 10 microns (PM<sub>10</sub>), Volatile Organic Compounds (VOC), and Lead (Pb) from the proposed boiler project exceed the PSD threshold for each respective PSD pollutant and Particulate Matter less than 2.5 microns (PM-2.5) nonattainment NSR (PM-10 as a surrogate). Sunoco proposes to synthetically limit the combined potential emissions of Boilers B004, B005, B006, and B010 to less than applicable PSD thresholds and PM-2.5 nonattainment NSR levels.

5. Conclusion:

The proposed potential emissions from the 2001-UC boiler modification project are less than PSD significant levels for SO<sub>2</sub>, CO, NO<sub>x</sub>, VOC, Lead, and PM<sub>10</sub> and PM-2.5 nonattainment NSR levels.

6. Please provide additional notes or comments as necessary:

None



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install**  
**Permit Number:** 07-00543  
**Facility ID:** 0773000080

**Summary (for informational purposes only)**  
**Total Permit Allowable Emissions**

| <u>Pollutant</u>    | <u>Tons Per Year</u> |
|---------------------|----------------------|
| PM/PM <sub>10</sub> | 40.94                |
| SO <sub>2</sub>     | 59.85                |
| CO                  | 195.72               |
| VOC                 | 45.17                |
| Lead                | 0.50                 |



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

**DRAFT**

**Air Pollution Permit-to-Install  
for  
Sunoco Inc (R&M)**

Facility ID: 0773000080  
Permit Number: 07-00543  
Permit Type: Admin mod  
Issued: 8/5/2008  
Effective: To be entered upon final issuance





State of Ohio Environmental Protection Agency  
 Division of Air Pollution Control

**Air Pollution Permit-to-Install**  
 for  
 Sunoco Inc (R&M)

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State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install**

**Permit Number:** 07-00543

**Facility ID:** 0773000080

**Effective Date:** To be entered upon final issuance

## Authorization

Facility ID: 0773000080

Facility Description: Chemical Process Plant

Application Number(s): A0007465

Permit Number: 07-00543

Permit Description: Administrative modification to allow for the use of AP-42 emission factors for natural gas combustions in B004, B005, B006 and B010 along with minor changes to B006 terms and conditions.

Permit Type: Admin mod

Permit Fee: \$4,000.00 *DO NOT send payment at this time, subject to change before final issuance*

Issue Date: 8/5/2008

Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Sunoco Inc (R&M)  
1019 Haverhill-Ohio Furnace Road  
Haverhill, OH 45636-0127

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

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Portsmouth City Health Dept., Air Pollution Unit  
605 Washington Street  
3rd Floor  
Portsmouth, OH 45662  
(740)353-5156

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director



## Authorization (continued)

Permit Number: 07-00543

Permit Description: Administrative modification to allow for the use of AP-42 emission factors for natural gas combustions in B004, B005, B006 and B010 along with minor changes to B006 terms and conditions.

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

- Emissions Unit ID:** **B004**  
 Company Equipment ID: 192 mmBtu per hour boiler (2001-UA)  
 Superseded Permit Number: 07-00240  
 General Permit Category and Type: Not Applicable
- Emissions Unit ID:** **B005**  
 Company Equipment ID: 197 mmBtu per hour boiler (2001-UB)  
 Superseded Permit Number: 07-00240  
 General Permit Category and Type: Not Applicable
- Emissions Unit ID:** **B006**  
 Company Equipment ID: 191 mmBtu per hour boiler (2001-UC)  
 Superseded Permit Number: 07-00240  
 General Permit Category and Type: Not Applicable
- Emissions Unit ID:** **B010**  
 Company Equipment ID: 190 mmBtu per hour boiler (2001-UE)  
 Superseded Permit Number: 07-00240  
 General Permit Category and Type: Not Applicable



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install**

**Permit Number:** 07-00543

**Facility ID:** 0773000080

**Effective Date:** To be entered upon final issuance

## **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 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 Portsmouth City Health Dept., Air Pollution Unit.



(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 Portsmouth City Health Dept., Air Pollution Unit. 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 Portsmouth City Health Dept., Air Pollution Unit 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 Portsmouth City Health Dept., Air Pollution Unit 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 Portsmouth City Health Dept., Air Pollution Unit 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 Portsmouth City Health Dept., Air Pollution Unit.
- 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 Portsmouth City Health Dept., Air Pollution Unit. 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 through completion of the annual PER covering the last period of operation 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 PER 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 PER, 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 Portsmouth City Health Dept., Air Pollution Unit must be notified in writing of any transfer of this permit.

**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.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install**

**Permit Number:** 07-00543

**Facility ID:** 0773000080

**Effective Date:** To be entered upon final issuance

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



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install**

**Permit Number:** 07-00543

**Facility ID:** 0773000080

**Effective Date:** To be entered upon final issuance

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.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install**

**Permit Number:** 07-00543

**Facility ID:** 0773000080

**Effective Date:** To be entered upon final issuance

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



**1. B004, 192 mmBtu per hour boiler (2001-UA)**

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

192 mmBtu per hour boiler (2001 UA) fired with: light hydrocarbon by product fuel; heavy hydrocarbon by product fuel; natural gas; No. 2 fuel oil; and/or No. 6 fuel oil

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|----|-------------------------------|--|
| a. | OAC rule 3745-31-05(A)(3)     | <p>Volatile organic compound emissions shall not exceed 1.0 pound per hour and 4.2 tons per year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-17-07(A), 3745-17-10(B)(1), 3745-17-10(C)(1), and 3745-18-79(B)(2).</p>  |
| b. | OAC rule 3745-31-05(D)        | <p>Particulate emissions less than 10 microns (PM<sub>10</sub>) shall not exceed 40.94 tons per year.*</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 59.85 tons per year.*</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 570.70 tons per year.*</p> <p>Carbon monoxide (CO) emissions shall not exceed 195.72 tons per year.*</p> <p>Volatile organic compound emissions shall not exceed 45.17 tons per year.*</p> <p>Lead emissions shall not exceed 0.50 ton per year.*</p> <p>* as a rolling, 12-month summation from Boilers B004, B005, B006 and B010</p> |



|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|----|-------------------------------|---|
|    |                               | combined.<br><br>See c) below.  |
| c. | OAC rule 3745-17-07(A)        | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.  |
| d. | OAC rule 3745-17-10(B)(1)     | Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input when burning only natural gas and/or #2 fuel oil  |
| e. | OAC rule 3745-17-10(C)(1)     | Particulate emissions shall not exceed 0.11 pound per mmBtu of actual heat input when burning #6 fuel oil and/or by-product fuel or when burning #6 fuel oil and/or by-product fuel in combination with natural gas and/or #2 fuel oil. This limit was calculated from curve P-1 of Figure I. |
| f. | OAC rule 3745-18-79(B)(2)     | Sulfur dioxide emissions shall not exceed 0.6 pound per mmBtu of actual heat input.   |
| g. | 40 CFR Part 63, Subpart EEE   | See b)(2)c below.   |

(2) Additional Terms and Conditions

- a. In accordance with OAC rule 3745-17-10(B), this particulate emission limitation is based on the combined total heat input for boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE (emissions units B004, B005, B006, and B010) which are physically or operationally united.
- b. The heavy hydrocarbon and light hydrocarbon by-product fuels are hazardous waste; therefore, boiler 2001-UA (emissions unit B004) is subject to the requirements of 40 CFR Part 266.
- c. Upon promulgation of the revised 40 CFR Part 63, Subpart EEE, Standards for Hazardous Air Pollutants for Hazardous Waste Combustors, which includes requirements for boilers that burn hazardous waste, the permittee shall comply per the applicable compliance schedule.

c) Operational Restrictions

- (1) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause CO emissions to exceed 195.72 tons per rolling 12-month period based on the following equation:

$$A * 84.00 \text{ lb/MMscf} + B * 5.00 \text{ lb/kgal} + C * 5.00 \text{ lb/kgal} + D * 5.00 \text{ lb/kgal} + E * 5.00 \text{ lb/kgal} \leq 195.72 \text{ tons of CO per 12-month rolling period}$$



where:

A = natural gas usage for the 12-month period (in MMscf) ;

B = heavy hydrocarbon usage for the 12-month period (in kgal);

C = light hydrocarbon usage for the 12-month period (in kgal) ;

D = number 2 Fuel Oil usage for the 12-month period (in kgal) ; and

E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (2) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause NOx emissions to exceed 570.70 tons per rolling 12-month period based on the following equation:

$$A * 280.00 \text{ lb/MMscf} + B * 47.00 \text{ lb/kgal} + C * 24.00 \text{ lb/kgal} + D * 24.00 \text{ lb/kgal} + E * 47.00 \text{ lb/kgal} \leq 570.70 \text{ tons of NOx per 12-month rolling period}$$

where:

A = natural gas usage for the 12-month period (in MMscf);

B = heavy hydrocarbon usage for the 12-month period (in kgal);

C = light hydrocarbon usage for the 12-month period (in kgal);

D = number 2 Fuel Oil usage for the 12-month period (in kgal); and

E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (3) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause VOC emissions to exceed 47.17 tons per rolling 12-month period based on the following equation:

$$A * 5.50 \text{ lb/MMscf} + B * 0.28 \text{ lb/kgal} + C * 0.20 \text{ lb/kgal} + D * 0.20 \text{ lb/kgal} + E * 0.28 \text{ lb/kgal} \leq 47.17 \text{ tons of VOC per 12-month rolling period}$$

where:

A = natural gas usage for the 12-month period (in MMscf);

B = heavy hydrocarbon usage for the 12-month period (in kgal);

C = light hydrocarbon usage for the 12-month period (in kgal);

D = number 2 Fuel Oil usage for the 12-month period (in kgal); and

E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (4) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause SO2 emissions to exceed 59.85 tons per rolling 12-month period based on the following equation:



$$A * 0.60 \text{ lb/MMscf} + B * (157*S) \text{ lb/kgal} + C * (157*S) \text{ lb/kgal} + D * (157*S) \text{ lb/kgal} + E * (157*S) \text{ lb/kgal} \leq 59.85 \text{ tons of SO}_2 \text{ per 12-month rolling period}$$

where:

- A = natural gas usage for the 12-month period (in MMscf);
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal);
- D = number 2 Fuel Oil usage for the 12-month period (in kgal);
- E = number 6 Fuel Oil usage for the 12-month period (in kgal); and
- S = percent sulfur in each fuel as determined in d)(1) for B004,

- (5) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause PM<sub>10</sub> emissions to exceed 40.94 tons per rolling 12-month period based on the following equation:

$$A * 7.60 \text{ lb/MMscf} + B * (79.98*H) \text{ lb/kgal} + C * (37*H) \text{ lb/kgal} + D * 3.3 \text{ lb/kgal} + E * (9.19S+4.72) \text{ lb/kgal} \leq 40.94 \text{ tons of PM}_{10} \text{ per 12-month rolling period}$$

where:

- A = natural gas usage for the 12-month period (in MMscf);
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal);
- D = number 2 Fuel Oil usage for the 12-month period (in kgal);
- E = number 6 Fuel Oil usage for the 12-month period (in kgal);
- H = percent ash in each fuel as determined in d)(1) for B004, B005, B006, and B010;and
- S = percent sulfur in each fuel as determined in d)(1) for B004, B005, B006, and B010.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and analyze samples of the light hydrocarbon waste fuels burned in boiler 2001-UA (emissions unit B004) on at least a monthly basis. Each light hydrocarbon waste fuel batch is defined by the results of the most recent sample. No light hydrocarbon waste fuel will be burned between the time the sample is taken and the time the sample results are received. Sunoco shall comply with the statistical based sampling of light hydrocarbon (LHC) waste fuel as outlined in Section C-4 of the current waste analysis plan.



The permittee shall collect and analyze samples of the heavy hydrocarbon waste fuels burned in boiler 2001-UA (emissions unit B004) for each batch collected in the heavy hydrocarbon waste fuel storage tanks. Each heavy hydrocarbon waste fuel batch is defined by the results of its batch sample. A new heavy hydrocarbon waste fuel batch will not be burned until the time the sample results of that batch are received.

Each sample shall be analyzed in accordance with the procedures specified in the following test methods:

- a. ASTM D240 or Ohio EPA approved equivalent to determine heating value (Btu/lb);
- b. ASTM D482 or Ohio EPA approved equivalent to determine ash content (weight %); and
- c. ASTM D4294, SW-846-9075 or Ohio EPA approved equivalent to determine sulfur content (weight %).

Alternative test methods may be used with prior approval from the Ohio EPA.

The permittee may use fuel analysis reports from the supplier to determine the heating value of natural gas and the heating value, ash content, and sulfur content of #2 fuel oil, and #6 fuel oil. The permittee may use AP-42 emission factors to determine the contribution to the SO<sub>2</sub> and PM emissions from the burning of natural gas.

Each natural gas fuel batch is defined by the most recent analysis received from the supplier. These analyses must be obtained at least every quarter. Each #2 fuel oil batch and #6 fuel oil batch is defined by the analysis for the most recent shipment of oil received.

- (2) Within 45 days of the end of each month, the permittee shall maintain at least monthly records of the following for each fuel batch-firing scenario burned in boiler 2001-UA (emissions unit B004):
  - a. The quantity of each fuel burned (pounds of hydrocarbon fuels, standard cubic feet of natural gas, pounds of fuel oil);
  - b. The heat content of each fuel (Btu per pound, Btu per standard cubic feet, Btu per pound);
  - c. The ash content of each hydrocarbon fuel and fuel oil (weight % );
  - d. The sulfur content of each hydrocarbon fuel and fuel oil (weight %);
  - e. The start time and date of each fuel batch firing scenario; and
  - f. The end time and date of each fuel batch firing scenario.

A fuel batch-firing scenario is defined as a combination of fuels burned with specific characteristics determined by the sampling results of d)(1) above. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch



analysis is received, as defined in d)(1), and/or when there is a change in the fuel or combination of fuels burned in boiler 2001-UA (emissions unit B004).

- (3) Within 45 days of the end of each month, the permittee shall calculate and maintain monthly records of the average pounds of particulate emissions per MMBTU for each fuel batch-firing scenario. The calculation shall be performed as described below.
  - a. Calculate the particulate emission contribution from each fuel burned, in pounds of particulate per fuel batch-firing scenario.
  - b. Calculate the total amount of particulate emitted per fuel batch-firing scenario by summing the contribution of each fuel burned.
  - c. Calculate the heat input for each fuel burned, in MMBTU per fuel batch-firing scenario.
  - d. Calculate the total heat input per fuel batch-firing scenario that was provided by the combined fuels by summing the contribution for each fuel burned.
  - e. Calculate the average emissions, in pounds of particulate per MMBTU per fuel batch-firing scenario of the combined fuels.
- (4) Within 45 days of the end of each month, the permittee shall calculate and maintain monthly records of the average pounds of sulfur dioxide emissions per MMBTU for each fuel batch-firing scenario. The calculation shall be performed as described below.
  - a. Calculate the sulfur dioxide emission contribution from each fuel burned, in pounds of sulfur dioxide per fuel batch-firing scenario.
  - b. Calculate the total amount of sulfur dioxide emitted per fuel batch-firing scenario by summing the contribution of each fuel burned.
  - c. Calculate the heat input for each fuel burned, in MMBTU per fuel batch-firing scenario.
  - d. Calculate the total heat input per fuel batch-firing scenario that was provided by the combined fuels by summing the contribution for each fuel burned.
  - e. Calculate the average emissions, in pounds of sulfur dioxide per MMBTU per fuel batch-firing scenario of the combined fuels.
- (5) Within 45 days of the end of each month, the permittee shall collect and record the following information each month for emissions units B004, B005, B006, and B010 combined:
  - a. The emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC and lead for each month in tons;
  - b. The updated rolling, 12-month summation of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC, and lead emissions in tons. This shall include information for the current month and the preceding eleven calendar months.



e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that include an identification of each fuel batch scenario during which the average sulfur dioxide emission rate exceeded 0.6 pound per mmBtu, and the actual sulfur dioxide emission rate for each such period.
- (2) The permittee shall submit quarterly deviation (excursion) reports that include an identification of each fuel batch scenario during which the average particulate emission rate exceeded 0.020 pound per mmBtu when burning natural gas and/or #2 fuel oil or 0.11 pound per mmBtu when burning #6 fuel oil and/or by-product fuel or when burning #6 fuel oil and/or by-product fuel in combination with natural gas and/or #2 fuel oil, and the actual particulate emission rate for each such period.
- (3) The permittee shall submit quarterly reports that identify the updated rolling, 12-month summation of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC and lead emissions for each calendar month for emissions units B004, B005, B006, and B010 combined.

The reports shall be submitted to the Portsmouth Local Air Agency within 45 days after the end of each calendar quarter of each year and shall cover the previous three calendar quarter months.

- (4) The deviation reports shall be submitted in accordance with the requirements specified in Standard Term and Condition A.4 of this permit.

f) Testing Requirements

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

a. Emission Limitation:

Volatile organic compound emissions shall not exceed 1.0 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emissions limit shall be demonstrated by multiplying the VOC emission factor for the worst case fuel times the maximum quantity of fuel fired per hour.

Natural gas was determined to be the worst case fuel. The emission factor for each fuel is listed below:

- i. 5.5 pounds of VOC per million standard cubic feet of natural gas burned (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.4, Table 1.4-2, dated July, 1998)
- ii. 0.20 pound of VOC per thousand gallons of # 2 fuel oil and/or light hydrocarbon fuel burned, a #2 fuel oil equivalent fuel (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.3, Table 1.3-3, dated September, 1998)



- iii. 0.28 pound of VOC per thousand gallons of # 6 fuel oil and/or heavy hydrocarbon fuel burned, a #6 oil equivalent fuel (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.3, Table 1.3-3, dated September, 1998)

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25, or 25A.

b. Emission Limitation:

Volatile organic compound emissions shall not exceed 4.2 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the pound per hour limit by 8,760 hours per year, and then dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly emission limit, compliance will also be shown with the annual limitation.

c. Emission Limitation:

If required, visible particulate emissions from the Boiler 2001-UA stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

d. Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input when burning only natural gas and/or #2 fuel oil.

Particulate emissions shall not exceed 0.11 pound per mmBtu of actual heat input when burning #6 fuel oil and/or by-product fuel or when burning #6 fuel oil and/or by-product fuel in combination with natural gas and/or #2 fuel oil.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 , 201 and 202 and the procedures and methods required in OAC rule 3745-17-03(B)(9).

e. Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.6 pound per mmBtu of actual heat input



Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 4, and 6 and the procedures and methods required in OAC rule 3745-18-04(E)(1).

f. Emission Limitation:

The combined emissions from emissions units B004, B005, B006, and B010 shall not exceed 195.72 tons per year CO, 570.70 tons per year NO<sub>x</sub>, 40.94 tons per year PM<sub>10</sub>, 59.85 tons per year SO<sub>2</sub>, 45.17 tons per year VOC, and 0.50 ton per year lead, on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in d)(5).

g) Miscellaneous Requirements

(1) None.



**2. B005, 197 mmBtu per hour boiler (2001-UB)**

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

197 mmBtu per hour boiler (2001 UB) fired with: light hydrocarbon by product fuel; heavy hydrocarbon by product fuel; natural gas; No. 2 fuel oil; and/or No. 6 fuel oil

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|----|-------------------------------|--|
| a. | OAC rule 3745-31-05(A)(3)     | <p>Volatile organic compound emissions shall not exceed 1.0 pound per hour and 4.2 tons per year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-17-07(A), 3745-17-10(B)(1), 3745-17-10(C)(1), and 3745-18-79(B)(2).</p>  |
| b. | OAC rule 3745-31-05(D)        | <p>Particulate emissions less than 10 microns (PM<sub>10</sub>) shall not exceed 40.94 tons per year.*</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 59.85 tons per year.*</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 570.70 tons per year.*</p> <p>Carbon monoxide (CO) emissions shall not exceed 195.72 tons per year.*</p> <p>Volatile organic compound emissions shall not exceed 45.17 tons per year.*</p> <p>Lead emissions shall not exceed 0.50 ton per year.*</p> <p>* as a rolling, 12-month summation from Boilers B004, B005, B006 and B010</p> |



|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|----|-------------------------------|---|
|    |                               | combined.<br><br>See c) below.  |
| c. | OAC rule 3745-17-07(A)        | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.  |
| d. | OAC rule 3745-17-10(B)(1)     | Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input when burning only natural gas and/or #2 fuel oil.   |
| e. | OAC rule 3745-17-10(C)(1)     | Particulate emissions shall not exceed 0.11 pound per mmBtu of actual heat input when burning #6 fuel oil and/or by-product fuel or when burning #6 fuel oil and/or by-product fuel in combination with natural gas and/or #2 fuel oil. This limit was calculated from curve P-1 of Figure I. |
| f. | OAC rule 3745-18-79(B)(2)     | Sulfur dioxide emissions shall not exceed 0.6 pound per mmBtu of actual heat input.   |
| g. | 40 CFR Part 63, Subpart EEE   | See b)(2)c below.   |

(2) Additional Terms and Conditions

- a. In accordance with OAC rule 3745-17-10(B), this particulate emission limitation is based on the combined total heat input for boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE (emissions units B004, B005, B006, and B010) which are physically or operationally united.
- b. The heavy hydrocarbon and light hydrocarbon by-product fuels are hazardous waste; therefore, boiler 2001-UB (emissions unit B005) is subject to the requirements of 40 CFR Part 266.
- c. Upon promulgation of the revised 40 CFR Part 63, Subpart EEE, Standards for Hazardous Air Pollutants for Hazardous Waste Combustors, which includes requirements for boilers that burn hazardous waste, the permittee shall comply per the applicable compliance schedule.

c) Operational Restrictions

- (1) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause CO emissions to exceed 195.72 tons per rolling 12-month period based on the following equation:

$$A * 84.00 \text{ lb/MMscf} + B * 5.00 \text{ lb/kgal} + C * 5.00 \text{ lb/kgal} + D * 5.00 \text{ lb/kgal} + E * 5.00 \text{ lb/kgal} \leq 195.72 \text{ tons of CO per 12-month rolling period}$$



where:

- A = natural gas usage for the 12-month period (in MMscf) ;
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal) ;
- D = number 2 Fuel Oil usage for the 12-month period (in kgal) ; and
- E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (2) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause NOx emissions to exceed 570.70 tons per rolling 12-month period based on the following equation:

$$A * 280.00 \text{ lb/MMscf} + B * 47.00 \text{ lb/kgal} + C * 24.00 \text{ lb/kgal} + D * 24.00 \text{ lb/kgal} + E * 47.00 \text{ lb/kgal} \leq 570.70 \text{ tons of NOx per 12-month rolling period}$$

where:

- A = natural gas usage for the 12-month period (in MMscf);
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal);
- D = number 2 Fuel Oil usage for the 12-month period (in kgal); and
- E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (3) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause VOC emissions to exceed 47.17 tons per rolling 12-month period based on the following equation:

$$A * 5.50 \text{ lb/MMscf} + B * 0.28 \text{ lb/kgal} + C * 0.20 \text{ lb/kgal} + D * 0.20 \text{ lb/kgal} + E * 0.28 \text{ lb/kgal} \leq 47.17 \text{ tons of VOC per 12-month rolling period}$$

where:

- A = natural gas usage for the 12-month period (in MMscf);
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal);
- D = number 2 Fuel Oil usage for the 12-month period (in kgal); and
- E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (4) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause SO2 emissions to exceed 59.85 tons per rolling 12-month period based on the following equation:



$$A * 0.60 \text{ lb/MMscf} + B * (157*S) \text{ lb/kgal} + C * (157*S) \text{ lb/kgal} + D * (157*S) \text{ lb/kgal} + E * (157*S) \text{ lb/kgal} \leq 59.85 \text{ tons of SO}_2 \text{ per 12-month rolling period}$$

where:

A = natural gas usage for the 12-month period (in MMscf);

B = heavy hydrocarbon usage for the 12-month period (in kgal);

C = light hydrocarbon usage for the 12-month period (in kgal);

D = number 2 Fuel Oil usage for the 12-month period (in kgal);

E = number 6 Fuel Oil usage for the 12-month period (in kgal); and

S = percent sulfur in each fuel as determined in d)(1) for B004, B005, B006, and B010.

- (5) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause PM<sub>10</sub> emissions to exceed 40.94 tons per rolling 12-month period based on the following equation:

$$A * 7.60 \text{ lb/MMscf} + B * (79.98*H) \text{ lb/kgal} + C * (37*H) \text{ lb/kgal} + D * 3.3 \text{ lb/kgal} + E * (9.19S+4.72) \text{ lb/kgal} \leq 40.94 \text{ tons of PM}_{10} \text{ per 12-month rolling period}$$

where:

A = natural gas usage for the 12-month period (in MMscf);

B = heavy hydrocarbon usage for the 12-month period (in kgal);

C = light hydrocarbon usage for the 12-month period (in kgal);

D = number 2 Fuel Oil usage for the 12-month period (in kgal);

E = number 6 Fuel Oil usage for the 12-month period (in kgal);

H = percent ash in each fuel as determined in d)(1) for B004, B005, B006, and B010;and

S = percent sulfur in each fuel as determined in d)(1) for B004, B005, B006, and B010.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and analyze samples of the light hydrocarbon waste fuels burned in boiler 2001-UB (emissions unit B005) on at least a monthly basis. Each light hydrocarbon waste fuel batch is defined by the results of the most recent sample. No light hydrocarbon waste fuel will be burned between the time the sample is taken and the time the sample results are received. Sunoco shall comply with the statistical based sampling of light hydrocarbon (LHC) waste fuel as outlined in Section C-4 of the current waste analysis plan.



The permittee shall collect and analyze samples of the heavy hydrocarbon waste fuels burned in boiler 2001-UB (emissions unit B005) for each batch collected in the heavy hydrocarbon waste fuel storage tanks. Each heavy hydrocarbon waste fuel batch is defined by the results of its batch sample. A new heavy hydrocarbon waste fuel batch will not be burned until the time the sample results of that batch are received.

Each sample shall be analyzed in accordance with the procedures specified in the following test methods:

- a. ASTM D240 or Ohio EPA approved equivalent to determine heating value (Btu/lb);
- b. ASTM D482 or Ohio EPA approved equivalent to determine ash content (weight %); and
- c. ASTM D 4294, SW-846-9075 or Ohio EPA approved equivalent to determine sulfur content (weight %).

Alternative test methods may be used with prior approval from the Ohio EPA.

The permittee may use fuel analysis reports from the supplier to determine the heating value of natural gas and the heating value, ash content, and sulfur content of #2 fuel oil, and #6 fuel oil. The permittee may use AP-42 emission factors to determine the contribution to the SO<sub>2</sub> and PM emissions from the burning of natural gas.

Each natural gas fuel batch is defined by the most recent analysis received from the supplier. These analyses must be obtained at least every quarter. Each #2 fuel oil batch and #6 fuel oil batch is defined by the analysis for the most recent shipment of oil received.

- (2) Within 45 days of the end of each month, the permittee shall maintain at least monthly records of the following for each fuel batch-firing scenario burned in boiler 2001-UB (emissions unit B005):
  - a. The quantity of each fuel burned (pounds of hydrocarbon fuels, standard cubic feet of natural gas, pounds of fuel oil);
  - b. The heat content of each fuel (Btu per pound, Btu per standard cubic feet, Btu per pound);
  - c. The ash content of each hydrocarbon fuel and fuel oil (weight % );
  - d. The sulfur content of each hydrocarbon fuel and fuel oil (weight %);
  - e. The start time and date of each fuel batch firing scenario; and
  - f. The end time and date of each fuel batch firing scenario.

A fuel batch-firing scenario is defined as a combination of fuels burned with specific characteristics determined by the sampling results of d)(1) above. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, as defined in d)(1), and/or when there is a change in the fuel or combination of fuels burned in boiler 2001-UB (emissions unit B005).



- (3) Within 45 days of the end of each month, the permittee shall calculate and maintain monthly records of the average pounds of particulate emissions per MMBTU for each fuel batch-firing scenario. The calculation shall be performed as described below.
    - a. Calculate the particulate emission contribution from each fuel burned, in pounds of particulate per fuel batch-firing scenario.
    - b. Calculate the total amount of particulate emitted per fuel batch-firing scenario by summing the contribution of each fuel burned.
    - c. Calculate the heat input for each fuel burned, in MMBTU per fuel batch-firing scenario.
    - d. Calculate the total heat input per fuel batch-firing scenario that was provided by the combined fuels by summing the contribution for each fuel burned.
    - e. Calculate the average emissions, in pounds of particulate per MMBTU per fuel batch-firing scenario of the combined fuels.
  - (4) Within 45 days of the end of each month, the permittee shall calculate and maintain monthly records of the average pounds of sulfur dioxide emissions per MMBTU for each fuel batch-firing scenario. The calculation shall be performed as described below.
    - a. Calculate the sulfur dioxide emission contribution from each fuel burned, in pounds of sulfur dioxide per fuel batch-firing scenario.
    - b. Calculate the total amount of sulfur dioxide emitted per fuel batch-firing scenario by summing the contribution of each fuel burned
    - c. Calculate the heat input for each fuel burned, in MMBTU per fuel batch-firing scenario
    - d. Calculate the total heat input per fuel batch-firing scenario that was provided by the combined fuels by summing the contribution for each fuel burned
    - e. Calculate the average emissions, in pounds of sulfur dioxide per MMBTU per fuel batch-firing scenario of the combined fuels.
  - (5) Within 45 days of the end of each month, the permittee shall collect and record the following information each month for emissions units B004, B005, B006, and B010 combined:
    - a. The emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC and lead for each month in tons;
    - b. The updated rolling, 12-month summation of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC, and lead emissions in tons. This shall include information for the current month and the preceding eleven calendar months.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that include an identification of each fuel batch scenario during which the average sulfur dioxide



emission rate exceeded 0.6 pound per mmBtu, and the actual sulfur dioxide emission rate for each such period.

- (2) The permittee shall submit quarterly deviation (excursion) reports that include an identification of each fuel batch scenario during which the average particulate emission rate exceeded 0.020 pound per mmBtu when burning natural gas and/or #2 fuel oil or 0.11 pound per mmBtu when burning #6 fuel oil and/or by-product fuel or when burning #6 fuel oil and/or by-product fuel in combination with natural gas and/or #2 fuel oil, and the actual particulate emission rate for each such period.
- (3) The permittee shall submit quarterly reports that identify the updated rolling, 12-month summation of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC and lead emissions for each calendar month for emissions units B004, B005, B006, and B010 combined.

The reports shall be submitted to the Portsmouth Local Air Agency within 45 days after the end of each calendar quarter of each year and shall cover the previous three calendar quarter months.

- (4) The deviation reports shall be submitted in accordance with the requirements specified in Standard Term and Condition A.4 of this permit.

f) Testing Requirements

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

a. Emission Limitation:

Volatile organic compound emissions shall not exceed 1.0 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emissions limit shall be demonstrated by multiplying the VOC emission factor for the worst case fuel times the maximum quantity of fuel fired per hour. Natural gas was determined to be the worst case fuel. The emission factor for each fuel is listed below:

- i. 5.5 pounds of VOC per million standard cubic feet of natural gas burned (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.4, Table 1.4-2, dated July, 1998)
- ii. 0.20 pound of VOC per thousand gallons of # 2 fuel oil and/or light hydrocarbon fuel burned, a #2 fuel oil equivalent fuel (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.3, Table 1.3-3, dated September, 1998)
- iii. 0.28 pound of VOC per thousand gallons of # 6 fuel oil and/or heavy hydrocarbon fuel burned, a #6 oil equivalent fuel (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.3, Table 1.3-3, dated September, 1998)



If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25, or 25A.

b. Emission Limitation:

Volatile organic compound emissions shall not exceed 4.2 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the pound per hour limit by 8,760 hours per year, and then dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly emission limit, compliance will also be shown with the annual limitation.

c. Emission Limitation:

Visible particulate emissions from the Boiler 2001-UB stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

d. Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input when burning only natural gas and/or #2 fuel oil.

Particulate emissions shall not exceed 0.11 pound per mmBtu of actual heat input when burning #6 fuel oil and/or by-product fuel or when burning #6 fuel oil and/or by-product fuel in combination with natural gas and/or #2 fuel oil.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 201 and 202 and the procedures and methods required in OAC rule 3745-17-03(B)(9).

e. Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.6 pound per mmBtu of actual heat input.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 4, and 6 and the procedures and methods required in OAC rule 3745-18-04(E)(1).



f. Emission Limitation:

The combined emissions from emissions units B004, B005, B006, and B010 shall not exceed 195.72 tons per year CO, 570.70 tons per year NO<sub>x</sub>, 40.94 tons per year PM<sub>10</sub>, 59.85 tons per year SO<sub>2</sub>, 45.17 tons per year VOC, and 0.50 ton per year lead, on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in d)(5).

g) Miscellaneous Requirements

(1) None.



**3. B006, 191 mmBtu per hour boiler (2001-UC)**

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

191 mmBtu per hour boiler (2001 UC) fired with: light hydrocarbon by product fuel; heavy hydrocarbon by product fuel; and/or natural gas;

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|----|-------------------------------|---|
| a. | OAC rule 3745-31-05(A)(3)     | <p>Volatile organic compound emissions shall not exceed 1.0 pound per hour.</p> <p>Sulfur dioxide emissions shall not exceed 11.07 pounds per hour.</p> <p>Sulfur dioxide emissions shall not exceed 0.6 pounds per mmBtu of actual heat input.</p> <p>Carbon monoxide emissions shall not exceed 14.28 pounds per hour.</p> <p>Particulate emissions shall not exceed 11.35 pounds per hour.</p> <p>Particulate matter less than 10 microns (PM<sub>10</sub>) shall not exceed 9.79 pounds per hour.</p> <p>Lead emissions shall not exceed 0.002 pound per hour.</p> <p>The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Db and OAC rules 3745-31-05(C), 3745-17-07(A), 3745-17-10(B)(1), 3745-17-10(C)(1).</p> |
| b. | OAC rule 3745-31-05(D)        | Particulate emissions less than 10 microns (PM <sub>10</sub> ) shall not exceed 40.94   |



|    | Applicable Rules/Requirements     | Applicable Emissions Limitations/Control Measures   |
|----|-----------------------------------|---|
|    |                                   | <p>tons per year.*</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 59.85 tons per year.*</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 570.70 tons per year.*</p> <p>Carbon Monoxide (CO) emissions shall not exceed 195.72 tons per year.*</p> <p>Volatile Organic Compound emissions shall not exceed 45.17 tons per year.*</p> <p>Lead emissions shall not exceed 0.50 ton per year.*</p> <p>* as a rolling, 12-month summation from Boilers B004, B005, B006 and B010 combined.</p> <p>See c) below.</p> |
| c. | OAC rule 3745-17-07(A)            | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.  |
| d. | OAC rule 3745-17-10(B)(1)         | Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input when burning only natural gas.  |
| e. | OAC rule 3745-17-10(C)(1)         | Particulate emissions shall not exceed 0.11 pound per mmBtu of actual heat input when burning by-product fuels or when burning by-product fuels in combination with natural gas. This limit was calculated from curve P-1 of Figure I.  |
| f. | 40 CFR Part 60, Subparts A and Db | <p>Nitrogen oxides emissions shall not exceed 0.2 lb/mmBtu of actual heat input when burning only natural gas.</p> <p>See b)(2)c through b)(2)f below.</p>  |
| g. | 40 CFR Part 63, Subpart EEE       | See b)(2)g below.   |

(2) Additional Terms and Conditions

- a. In accordance with OAC rule 3745-17-10(B), this particulate emission limitation is based on the combined total heat input for boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE (emissions units B004, B005, B006, and B010) which are physically or operationally united.



b. The heavy hydrocarbon and light hydrocarbon by-product fuels are hazardous waste; therefore, boiler 2001-UC (emissions unit B006) is subject to the requirements of 40 CFR Part 266.

c. [40 CFR 60.44b(e)]

The nitrogen oxides emission limit is determined according to the following equation when burning natural gas in combination with by-products waste fuels:

$$\text{Nitrogen Oxides emission limit (lb/MMBTU)} = [0.2 \text{ lb/MMBTU}] * \text{heat input from natural gas (MMBTU)} + [0.4 \text{ (lb/MMBTU)} * \text{heat input from by-product fuels (MMBTU)}] / [\text{heat input from natural gas (MMBTU)} + \text{heat input from by-product fuels (MMBTU)}]$$

d. [40 CFR 60.44b(h)]

The nitrogen oxides standards under 40 CFR Part 60.44b shall apply at all times, including periods of startup, shutdown, or malfunction.

e. [40 CFR 60.44b(i)]

Compliance with the nitrogen oxides emission limitation established pursuant to 40 CFR Part 60, Subpart Db shall be determined on a rolling, 30-day average basis.

f. Within 180 days of the modification of boiler 2001-UC , the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO<sub>x</sub> monitoring system, designed to ensure continuous valid and representative readings of NO<sub>x</sub> emissions 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<sub>x</sub> 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. Upon promulgation of the revised 40 CFR Part 63, Subpart EEE, Standards for Hazardous Air Pollutants for Hazardous Waste Combustors, which includes requirements for boilers that burn hazardous waste, the permittee shall comply per the applicable compliance schedule.

c) Operational Restrictions

(1) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause CO emissions to exceed 195.72 tons per rolling 12-month period based on the following equation:

$$A * 84.00 \text{ lb/MMscf} + B * 5.00 \text{ lb/kgal} + C * 5.00 \text{ lb/kgal} + D * 5.00 \text{ lb/kgal} + E * 5.00 \text{ lb/kgal} \leq 195.72 \text{ tons of CO per 12-month rolling period}$$



where:

- A = natural gas usage for the 12-month period (in MMscf) ;
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal) ;
- D = number 2 Fuel Oil usage for the 12-month period (in kgal) ; and
- E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (2) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause NOx emissions to exceed 570.70 tons per rolling 12-month period based on the following equation:

$$A * 280.00 \text{ lb/MMscf} + B * 47.00 \text{ lb/kgal} + C * 24.00 \text{ lb/kgal} + D * 24.00 \text{ lb/kgal} + E * 47.00 \text{ lb/kgal} \leq 570.70 \text{ tons of NOx per 12-month rolling period}$$

where:

- A = natural gas usage for the 12-month period (in MMscf);
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal);
- D = number 2 Fuel Oil usage for the 12-month period (in kgal); and
- E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (3) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause VOC emissions to exceed 47.17 tons per rolling 12-month period based on the following equation:

$$A * 5.50 \text{ lb/MMscf} + B * 0.28 \text{ lb/kgal} + C * 0.20 \text{ lb/kgal} + D * 0.20 \text{ lb/kgal} + E * 0.28 \text{ lb/kgal} \leq 47.17 \text{ tons of VOC per 12-month rolling period}$$

where:

- A = natural gas usage for the 12-month period (in MMscf);
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal);
- D = number 2 Fuel Oil usage for the 12-month period (in kgal); and
- E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (4) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause SO2 emissions to exceed 59.85 tons per rolling 12-month period based on the following equation:



$$A * 0.60 \text{ lb/MMscf} + B * (157*S) \text{ lb/kgal} + C * (157*S) \text{ lb/kgal} + D * (157*S) \text{ lb/kgal} + E * (157*S) \text{ lb/kgal} \leq 59.85 \text{ tons of SO}_2 \text{ per 12-month rolling period}$$

where:

A = natural gas usage for the 12-month period (in MMscf);

B = heavy hydrocarbon usage for the 12-month period (in kgal);

C = light hydrocarbon usage for the 12-month period (in kgal);

D = number 2 Fuel Oil usage for the 12-month period (in kgal);

E = number 6 Fuel Oil usage for the 12-month period (in kgal); and

S = percent sulfur in each fuel as determined in d)(1) for B004, B005, B006, and B010.

- (5) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause PM<sub>10</sub> emissions to exceed 40.94 tons per rolling 12-month period based on the following equation:

$$A * 7.60 \text{ lb/MMscf} + B * (79.98*H) \text{ lb/kgal} + C * (37*H) \text{ lb/kgal} + D * 3.3 \text{ lb/kgal} + E * (9.19S+4.72) \text{ lb/kgal} \leq 40.94 \text{ tons of PM}_{10} \text{ per 12-month rolling period}$$

where:

A = natural gas usage for the 12-month period (in MMscf);

B = heavy hydrocarbon usage for the 12-month period (in kgal);

C = light hydrocarbon usage for the 12-month period (in kgal);

D = number 2 Fuel Oil usage for the 12-month period (in kgal);

E = number 6 Fuel Oil usage for the 12-month period (in kgal);

H = percent ash in each fuel as determined in d)(1) for B004, B005, B006, and B010;and

S = percent sulfur in each fuel as determined in d)(1) for B004, B005, B006, and B010.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall collect and analyze samples of the light hydrocarbon waste fuels burned in boiler 2001-UC (emissions unit B006) on at least a monthly basis. Each light hydrocarbon waste fuel batch is defined by the results of the most recent sample. No light hydrocarbon waste fuel will be burned between the time the sample is taken and the time the sample results are received. Sunoco shall comply with the statistical based sampling of light hydrocarbon (LHC) waste fuel as outlined in Section C-4 of the current waste analysis plan.



The permittee shall collect and analyze samples of the heavy hydrocarbon waste fuels burned in boiler 2001-UC (emissions unit B006) for each batch collected in the heavy hydrocarbon waste fuel storage tanks. Each heavy hydrocarbon waste fuel batch is defined by the results of its batch sample. A new heavy hydrocarbon waste fuel batch will not be burned until the time the sample results of that batch are received.

Each sample shall be analyzed in accordance with the procedures specified in the following test methods:

- a. ASTM D240 or Ohio EPA approved equivalent to determine heating value (Btu/lb);
- b. ASTM D482 or Ohio EPA approved equivalent to determine ash content (weight %); and
- c. ASTM D4294, SW-846-9075 or Ohio EPA approved equivalent to determine sulfur content (weight %).

Alternative test methods may be used with prior approval from the Ohio EPA.

The permittee may use fuel analysis reports from the supplier to determine the heating value of natural gas. The permittee may use AP-42 emission factors to determine the contribution to the SO<sub>2</sub> and PM emissions from the burning of natural gas.

Each natural gas fuel batch is defined by the most recent analysis received from the supplier. These analyses must be obtained at least every quarter.

- (2) Within 45 days of the end of each month, the permittee shall maintain at least monthly records of the following for each fuel batch-firing scenario burned in boiler 2001-UC (emissions unit B006):
  - a. The quantity of each fuel burned (pounds of hydrocarbon fuels, standard cubic feet of natural gas);
  - b. The heat content of each fuel (Btu per pound, Btu per standard cubic feet);
  - c. The ash content of each hydrocarbon fuel (weight %);
  - d. The sulfur content of each hydrocarbon fuel (weight %);
  - e. The start time and date of each fuel batch firing scenario; and
  - f. The end time and date of each fuel batch firing scenario.

A fuel batch-firing scenario is defined as a combination of fuels burned with specific characteristics determined by the sampling results of d)(1) above. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, as defined in d)(1), and/or when there is a change in the fuel or combination of fuels burned in boiler 2001-UC (emissions unit B006).

- (3) Within 45 days of the end of each month, the permittee shall calculate and maintain monthly records of the average pounds of particulate emissions per MMBTU for each fuel batch-firing scenario.



The calculation shall be performed as described below.

- a. Calculate the particulate emission contribution from each fuel burned, in pounds of particulate per fuel batch-firing scenario.
  - b. Calculate the total amount of particulate emitted per fuel batch-firing scenario by summing the contribution of each fuel burned.
  - c. Calculate the heat input for each fuel burned, in MMBTU per fuel batch-firing scenario.
  - d. Calculate the total heat input per fuel batch-firing scenario that was provided by the combined fuels by summing the contribution for each fuel burned.
  - e. Calculate the average emissions, in pounds of particulate per MMBTU per fuel batch-firing scenario of the combined fuels.
- (4) Within 45 days of the end of each month, the permittee shall calculate and maintain monthly records of the average pounds of sulfur dioxide emissions per MMBTU for each fuel batch-firing scenario. The calculation shall be performed as described below.
- a. Calculate the sulfur dioxide emission contribution from each fuel burned, in pounds of sulfur dioxide per fuel batch-firing scenario.
  - b. Calculate the total amount of sulfur dioxide emitted per fuel batch-firing scenario by summing the contribution of each fuel burned.
  - c. Calculate the heat input for each fuel burned, in MMBTU per fuel batch-firing scenario.
  - d. Calculate the total heat input per fuel batch-firing scenario that was provided by the combined fuels by summing the contribution for each fuel burned.
  - e. Calculate the average emissions, in pounds of sulfur dioxide per MMBTU per fuel batch-firing scenario of the combined fuels.
- (5) Within 45 days of the end of each month, the permittee shall collect and record the following information each month for emissions units B004, B005, B006, and B010 combined:
- a. The emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC and lead for each month in tons;
  - b. The updated rolling, 12-month summation of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC, and lead emissions in tons. This shall include information for the current month and the preceding eleven calendar months.
- (6) [40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

The permittee shall install, operate, and maintain equipment to continuously monitor and record NO<sub>x</sub> 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.



The permittee shall maintain records of data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to:

- a. emissions of NO<sub>x</sub> in parts per million on an instantaneous (one-minute) basis;
- b. emissions of NO<sub>x</sub> in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous NO<sub>x</sub> monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO<sub>x</sub> monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO<sub>x</sub> monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

(7) The permittee shall maintain a certification letter from the Ohio EPA documenting that the NO<sub>x</sub> CEMS has been certified in accordance with the requirements of 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

(8) [40 CFR 60.49b(d)]

The permittee shall record and maintain records of the amounts of natural gas and by-product fuels combusted during each day and calculate the annual capacity factor natural gas for the reporting period. The annual capacity factor is determined on a rolling, 12-month average basis with a new annual capacity factor calculated at the end of each calendar month.

(9) Prior to the installation of the continuous NO<sub>x</sub> 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 for approval by the Ohio EPA, Central Office.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.



e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that include an identification of each fuel batch scenario during which the average sulfur dioxide emission rate exceeded 0.6 pound per mmBtu, and the actual sulfur dioxide emission rate for each such period.
- (2) The permittee shall submit quarterly deviation (excursion) reports that include an identification of each fuel batch scenario during which the average particulate emission rate exceeded 0.020 pound per mmBtu when burning natural gas or 0.11 pound per mmBtu when burning by-product fuel or when burning by-product fuel in combination with natural gas, and the actual particulate emission rate for each such period.
- (3) The permittee shall submit quarterly reports that identify the updated rolling, 12-month summation of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC and lead emissions for each calendar month for emissions units B004, B005, B006, and B010 combined.

The reports shall be submitted to the Portsmouth Local Air Agency within 45 days after the end of each calendar quarter of each year and shall cover the previous three calendar quarter months.

- (4) The deviation reports shall be submitted in accordance with the requirements specified in Standard Term and Condition A.4 of this permit.
- (5) [40 CFR 60.7]

The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO<sub>x</sub> 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<sub>x</sub> emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. 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. 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> monitoring system, emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime\*\* of the continuous NO<sub>x</sub> monitoring system and/or control equipment 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

- (6) Pursuant to the NSPS, the permittee is hereby advised of the requirement to report the following at the appropriate times:
  - a. Construction date (no later than 30 days after such date);
  - b. Anticipated start up date (not more than 60 days or less than 30 days prior to such date);
  - c. Actual start-up date (within 15 days of such date); and



d. Date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency

DAPC - Permit Management Unit

Lazarus Government Center

P. O. Box 1049

Columbus, Ohio 43216-1049

and

Portsmouth Local Air Agency

605 Washington Street, Third Floor

Portsmouth, Ohio 45662

f) Testing Requirements

(1) Compliance with the emission limitations in section A.1.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Volatile organic compound emissions shall not exceed 1.0 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emissions limit shall be demonstrated by multiplying the VOC emission factor for the worst case fuel times the maximum quantity of fuel fired per hour. Natural gas was determined to be the worst case fuel. The emission factor for each fuel is listed below:

- i. 5.5 pounds of VOC per million standard cubic feet of natural gas burned (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.4, Table 1.4-2, dated July, 1998)
- ii. 0.20 pound of VOC per thousand gallons of light hydrocarbon fuel burned, a #2 oil equivalent fuel (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.3, Table 1.3-3, dated September, 1998)
- iii. 0.28 pound of VOC per thousand gallons of heavy hydrocarbon fuel burned, a #6 fuel oil equivalent (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.3, Table 1.3-3, dated September, 1998)

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25, or 25A.



b. Emission Limitation:

Sulfur dioxide emissions shall not exceed 11.07 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated by the performance testing as described in f)(2). and ongoing compliance shall be demonstrated with the sulfur content in d)(2) and through the record keeping in d)(4).

c. Emission Limitation:

Carbon monoxide emissions shall not exceed 14.28 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 10.

d. Emission Limitation:

Particulate emissions shall not exceed 11.35 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated by the performance testing as described in f)(2). and ongoing compliance shall be demonstrated with the ash content in d)(2) and through the record keeping in d)(3).

e. Emission Limitation:

Particulate emissions less than 10 microns shall not exceed 9.79 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated by the performance testing as described in f)(2). and ongoing compliance shall be demonstrated with the ash content in d)(2) and through the record keeping in d)(3).

f. Emission Limitation:

Lead emissions shall not exceed 0.002 pound per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 12

g. Emission Limitation:

Visible particulate emissions from the Boiler 2001-UC stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.



Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input when burning only natural gas.

Particulate emissions shall not exceed 0.11 pound per mmBtu of actual heat input when burning by-product fuels or when burning by-product fuels in combination with natural gas.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 201 and 202 and the procedures and methods required in OAC rule 3745-17-03(B)(9).

i. Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.6 pound per mmBtu of actual heat input.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 4, and 6 and the procedures and methods required in OAC rule 3745-18-04(E)(1).

j. Emission Limitation:

The combined emissions from emissions units B004, B005, B006, and B010 shall not exceed 195.72 tons per year CO, 570.70 tons per year NOx, 40.94 tons per year PM<sub>10</sub>, 59.85 tons per year SO<sub>2</sub>, 45.17 tons per year VOC, and 0.50 ton per year lead, on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in Section A.III.5.

k. Emission Limitation:

Nitrogen oxides emissions shall not exceed 0.2 pound per mmBtu as a rolling, 30-day average when burning only natural gas.

The nitrogen oxides emission limit is determined according to the following equation when burning natural gas in combination with by-products waste fuels:

Nitrogen oxides emission limit (lb/MMBTU) = [0.2 lb/MMBTU) \* heat input from natural gas (MMBTU)] + [0.4 (lb/MMBTU) \* heat input from by-product fuels



(MMBTU) ] / [heat input from natural gas (MMBTU) + heat input from by-product fuels (MMBTU)]

Applicable Compliance Method:

Compliance with the nitrogen oxides pound per mmBtu emission limitation shall be determined on a continuous basis through the use of a rolling, 30-day average emission rate calculated from the hourly average data obtained by the continuous nitrogen oxides CEMS. A new rolling, 30-day average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

Initial compliance shall be demonstrated by the performance testing as described in f)(2).

- (2) The permittee shall conduct, or have conducted, the initial emission testing for Boiler 2001-UC in accordance with the following requirements:
  - a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which Boiler 2001-UC will be operated, but not later than 180 days after the initial startup of modified Boiler 2001-UC.
  - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for nitrogen oxides and particulates while burning natural gas in combination with HHC by-product fuel; and for sulfur dioxides while burning HHC and LHC fuel with natural gas.
  - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 201 and 202 of 40 CFR Part 60, Appendix A, for sulfur dioxide, Method 6 or 6e of 40 CFR Part 60, Appendix A, for nitrogen oxides, Method 7 of 40 CFR Part 60, Appendix A, Alternative U. S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Portsmouth local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth local air agency. 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 Portsmouth local air agency's refusal to accept the results of the emission test(s).

Personnel from the Portsmouth local air agency 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.



A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth local air agency 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 Portsmouth local air agency.

- (3) Within 60 days of the initial startup of modified Boiler 2001-UC , the permittee shall conduct certification tests of the continuous NO<sub>x</sub> monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; ORC section 3704.03(I); and 40 CFR Part 75.

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 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, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO<sub>x</sub> 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 6; ORC section 3704.03(I); . The letter/document of certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO<sub>x</sub> monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Ongoing compliance with the NO<sub>x</sub> emissions limitations 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 through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

g) Miscellaneous Requirements

- (1) None.



**4. B010, 190 mmBtu per hour boiler (2001-UE)**

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

190 mmBtu per hour boiler (2001 UE) fired with: light hydrocarbon by product fuel; natural gas; No. 2 fuel oil; and/or No. 6 fuel oil

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|----|-------------------------------|--|
| a. | OAC rule 3745-31-05(A)(3)     | <p>Volatile organic compound emissions shall not exceed 1.0 pound per hour and 4.2 tons per year.</p> <p>Sulfur dioxide emissions shall not exceed 1.6 pounds per mmBtu of actual heat input.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-17-07(A), 3745-17-10(B)(1), 3745-17-10(C)(1), and 3745-18-06.</p>  |
| b. | OAC rule 3745-31-05(D)        | <p>Particulate emissions less than 10 microns (PM<sub>10</sub>) shall not exceed 40.94 tons per year.*</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 59.85 tons per year.*</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 570.70 tons per year.*</p> <p>Carbon monoxide (CO) emissions shall not exceed 195.72 tons per year.*</p> <p>Volatile organic compound emissions shall not exceed 45.17 tons per year.*</p> <p>Lead emissions shall not exceed 0.50 ton</p> |



|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|----|-------------------------------|---|
|    |                               | per year.*<br><br>* as a rolling, 12-month summation from Boilers B004, B005, B006 and B010 combined.<br><br>See c) below.  |
| c. | OAC rule 3745-17-07(A)        | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.  |
| d. | OAC rule 3745-17-10(B)(1)     | Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input when burning only natural gas and/or #2 fuel oil.   |
| e. | OAC rule 3745-17-10(C)(1)     | Particulate emissions shall not exceed 0.11 pound per mmBtu of actual heat input when burning #6 fuel oil and/or by-product fuel or when burning #6 fuel oil and/or by-product fuel in combination with natural gas and/or #2 fuel oil. This limit was calculated from curve P-1 of Figure I. |
| f. | OAC rule 3745-18-06           | The emission limitation specified by this rule is equivalent to the emission limitation established by OAC rule 3745-31-05(A)(3).   |
| g. | 40 CFR Part 63, Subpart EEE   | See b)(2)c below.   |

(2) Additional Terms and Conditions

- a. In accordance with OAC rule 3745-17-10(B), this particulate emission limitation is based on the combined total heat input for boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE (emissions units B004, B005, B006, and B010) which are physically or operationally united.
- b. The light hydrocarbon by-product fuel is a hazardous waste; therefore, boiler 2001-UE (emissions unit B010) is subject to the requirements of 40 CFR Part 266.
- c. Upon promulgation of the revised 40 CFR Part 63, Subpart EEE, Standards for Hazardous Air Pollutants for Hazardous Waste Combustors, which includes requirements for boilers that burn hazardous waste, the permittee shall comply per the applicable compliance schedule.



c) Operational Restrictions

- (1) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause CO emissions to exceed 195.72 tons per rolling 12-month period based on the following equation:

$$A * 84.00 \text{ lb/MMscf} + B * 5.00 \text{ lb/kgal} + C * 5.00 \text{ lb/kgal} + D * 5.00 \text{ lb/kgal} + E * 5.00 \text{ lb/kgal} \leq 195.72 \text{ tons of CO per 12-month rolling period}$$

where:

- A = natural gas usage for the 12-month period (in MMscf) ;
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal) ;
- D = number 2 Fuel Oil usage for the 12-month period (in kgal) ; and
- E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (2) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause NOx emissions to exceed 570.70 tons per rolling 12-month period based on the following equation:

$$A * 280.00 \text{ lb/MMscf} + B * 47.00 \text{ lb/kgal} + C * 24.00 \text{ lb/kgal} + D * 24.00 \text{ lb/kgal} + E * 47.00 \text{ lb/kgal} \leq 570.70 \text{ tons of NOx per 12-month rolling period}$$

where:

- A = natural gas usage for the 12-month period (in MMscf);
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal);
- D = number 2 Fuel Oil usage for the 12-month period (in kgal); and
- E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (3) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause VOC emissions to exceed 47.17 tons per rolling 12-month period based on the following equation:

$$A * 5.50 \text{ lb/MMscf} + B * 0.28 \text{ lb/kgal} + C * 0.20 \text{ lb/kgal} + D * 0.20 \text{ lb/kgal} + E * 0.28 \text{ lb/kgal} \leq 47.17 \text{ tons of VOC per 12-month rolling period}$$

where:

- A = natural gas usage for the 12-month period (in MMscf);
- B = heavy hydrocarbon usage for the 12-month period (in kgal);
- C = light hydrocarbon usage for the 12-month period (in kgal);



D = number 2 Fuel Oil usage for the 12-month period (in kgal); and

E = number 6 Fuel Oil usage for the 12-month period (in kgal).

- (4) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause SO<sub>2</sub> emissions to exceed 59.85 tons per rolling 12-month period based on the following equation:

$$A * 0.60 \text{ lb/MMscf} + B * (157*S) \text{ lb/kgal} + C * (157*S) \text{ lb/kgal} + D * (157*S) \text{ lb/kgal} + E * (157*S) \text{ lb/kgal} \leq 59.85 \text{ tons of SO}_2 \text{ per 12-month rolling period}$$

where:

A = natural gas usage for the 12-month period (in MMscf);

B = heavy hydrocarbon usage for the 12-month period (in kgal);

C = light hydrocarbon usage for the 12-month period (in kgal);

D = number 2 Fuel Oil usage for the 12-month period (in kgal);

E = number 6 Fuel Oil usage for the 12-month period (in kgal); and

S = percent sulfur in each fuel as determined in d)(1) for B004, B005, B006, and B010.

- (5) The fuel usage in boilers 2001-UA, 2001-UB, 2001-UC, and 2001-UE shall not cause PM<sub>10</sub> emissions to exceed 40.94 tons per rolling 12-month period based on the following equation:

$$A * 7.60 \text{ lb/MMscf} + B * (79.98*H) \text{ lb/kgal} + C * (37*H) \text{ lb/kgal} + D * 3.3 \text{ lb/kgal} + E * (9.19S+4.72) \text{ lb/kgal} \leq 40.94 \text{ tons of PM}_{10} \text{ per 12-month rolling period}$$

where:

A = natural gas usage for the 12-month period (in MMscf);

B = heavy hydrocarbon usage for the 12-month period (in kgal);

C = light hydrocarbon usage for the 12-month period (in kgal);

D = number 2 Fuel Oil usage for the 12-month period (in kgal);

E = number 6 Fuel Oil usage for the 12-month period (in kgal);

H = percent ash in each fuel as determined in d)(1) for B004, B005, B006, and B010;and

S = percent sulfur in each fuel as determined in d)(1) for B004, B005, B006, and B010.



d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and analyze samples of the light hydrocarbon waste fuels burned in boiler 2001-UE (emissions unit B010) on at least a monthly basis. Each light hydrocarbon waste fuel batch is defined by the results of the most recent sample. No light hydrocarbon waste fuel will be burned between the time the sample is taken and the time the sample results are received. Sunoco shall comply with the statistical based sampling of light hydrocarbon (LHC) waste fuel as outlined in Section C-4 of the current waste analysis plan.

Each sample shall be analyzed in accordance with the procedures specified in the following test methods:

- a. ASTM D240 or Ohio EPA approved equivalent to determine heating value (Btu/lb);
- b. ASTM D482 or Ohio EPA approved equivalent to determine ash content (weight %); and
- c. ASTM D4294, SW-846-9075 or Ohio EPA approved equivalent to determine sulfur content (weight %).

Alternative test methods may be used with prior approval from the Ohio EPA.

The permittee may use fuel analysis reports from the supplier to determine the heating value of natural gas and the heating value, ash content, and sulfur content of #2 fuel oil and #6 fuel oil. The permittee may use AP-42 emission factors to determine the contribution of SO<sub>2</sub> and PM emissions from the burning of natural gas.

Each natural gas fuel batch is defined by the most recent analysis received from the supplier. These analyses must be obtained at least every quarter. Each #2 fuel oil batch and #6 fuel oil batch is defined by the analysis for the most recent shipment of oil received.

- (2) Within 45 days of the end of each month, the permittee shall maintain at least monthly records of the following for each fuel batch-firing scenario burned in boiler 2001-UE (emissions unit B010):
- a. The quantity of each fuel burned (pounds of hydrocarbon fuels, standard cubic feet of natural gas, pounds of fuel oil);
  - b. The heat content of each fuel (Btu per pound, Btu per standard cubic feet, Btu per pound);
  - c. The ash content of each hydrocarbon fuel and fuel oil (weight %);
  - d. The sulfur content of each hydrocarbon fuel and fuel oil (weight %);
  - e. The start time and date of each fuel batch firing scenario; and
  - f. The end time and date of each fuel batch firing scenario.



A fuel batch-firing scenario is defined as a combination of fuels burned with specific characteristics determined by the sampling results of d)(1) above. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, as defined in d)(1), and/or when there is a change in the fuel or combination of fuels burned in boiler 2001-UE (emissions unit B010).

- (3) Within 45 days of the end of each month, the permittee shall calculate and maintain monthly records of the average pounds of particulate emissions per MMBTU for each fuel batch-firing scenario.

The calculation shall be performed as described below.

- a. Calculate the particulate emission contribution from each fuel burned, in pounds of particulate per fuel batch-firing scenario.
- b. Calculate the total amount of particulate emitted per fuel batch-firing scenario by summing the contribution of each fuel burned.
- c. Calculate the heat input for each fuel burned, in MMBTU per fuel batch-firing scenario.
- d. Calculate the total heat input per fuel batch-firing scenario that was provided by the combined fuels by summing the contribution for each fuel burned.
- e. Calculate the average emissions, in pounds of particulate per MMBTU per fuel batch-firing scenario of the combined fuels.

- (4) Within 45 days of the end of each month, the permittee shall calculate and maintain monthly records of the average pounds of sulfur dioxide emissions per MMBTU for each fuel batch-firing scenario. The calculation shall be performed as described below.

- a. Calculate the sulfur dioxide emission contribution from each fuel burned, in pounds of sulfur dioxide per fuel batch-firing scenario.
- b. Calculate the total amount of sulfur dioxide emitted per fuel batch-firing scenario by summing the contribution of each fuel burned.
- c. Calculate the heat input for each fuel burned, in MMBTU per fuel batch-firing scenario
- d. Calculate the total heat input per fuel batch-firing scenario that was provided by the combined fuels by summing the contribution for each fuel burned.
- e. Calculate the average emissions, in pounds of sulfur dioxide per MMBTU per fuel batch-firing scenario of the combined fuels.

- (5) Within 45 days of the end of each month, the permittee shall collect and record the following information each month for emissions units B004, B005, B006, and B010 combined:

- a. The emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC and lead for each month in tons;



- b. The updated rolling, 12-month summation of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC, and lead emissions in tons. This shall include information for the current month and the preceding eleven calendar months.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that include an identification of each fuel batch scenario during which the average sulfur dioxide emission rate exceeded 1.6 pound per mmBtu, and the actual sulfur dioxide emission rate for each such period.
- (2) The permittee shall submit quarterly deviation (excursion) reports that include an identification of each fuel batch scenario during which the average particulate emission rate exceeded 0.020 pound per mmBtu when burning natural gas and/or #2 fuel oil or 0.11 pound per mmBtu when burning #6 fuel oil and/or by-product fuel or when burning #6 fuel oil and/or by-product fuel in combination with natural gas and/or #2 fuel oil, and the actual particulate emission rate for each such period.
- (3) The permittee shall submit quarterly reports that identify the updated rolling, 12-month summation of CO, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, VOC and lead emissions for each calendar month for emissions units B004, B005, B006, and B010 combined.

The reports shall be submitted to the Portsmouth Local Air Agency within 45 days after the end of each calendar quarter of each year and shall cover the previous three calendar quarter months.

- (4) The deviation reports shall be submitted in accordance with the requirements specified in Standard Term and Condition A.4 of this permit.

f) Testing Requirements

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

a. Emission Limitation:

Volatile organic compound emissions shall not exceed 1.0 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emissions limit shall be demonstrated by multiplying the VOC emission factor for the worst case fuel times the maximum quantity of fuel fired per hour.

Natural gas was determined to be the worst case fuel. The emission factor for each fuel is listed below:

- i. 5.5 pounds of VOC per million standard cubic feet of natural gas burned (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.4, Table 1.4-2, dated July, 1998)
- ii. 0.20 pound of VOC per thousand gallons of # 2 fuel oil and/or light hydrocarbon fuel burned, a #2 fuel oil equivalent fuel (obtained from AP-



42, Volume I, 5th Edition, Chapter 1, Section 1.3, Table 1.3-3, dated September, 1998)

- iii. 0.28 pound of VOC per thousand gallons of # 6 fuel oil (obtained from AP-42, Volume I, 5th Edition, Chapter 1, Section 1.3, Table 1.3-3, dated September, 1998)

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25, or 25A.

b. Emission Limitation:

Volatile organic compound emissions shall not exceed 4.2 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the pound per hour limit by 8,760 hours per year, and then dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly emission limit, compliance will also be shown with the annual limitation.

c. Emission Limitation:

Visible particulate emissions from the Boiler 2001-UE stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

d. Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input when burning only natural gas and/or #2 fuel oil.

Particulate emissions shall not exceed 0.11 pound per mmBtu of actual heat input when burning #6 fuel oil and/or by-product fuel or when burning #6 fuel oil and/or by-product fuel in combination with natural gas and/or #2 fuel oil.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 201 and 202 and the procedures and methods required in OAC rule 3745-17-03(B)(9).

e. Emission Limitation:

Sulfur dioxide emissions shall not exceed 1.6 pound per mmBtu of actual heat input.



Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 4, and 6 and the procedures and methods required in OAC rule 3745-18-04(E)(1).

f. Emission Limitation:

The combined emissions from emissions units B004, B005, B006, and B010 shall not exceed 195.72 tons per year CO, 570.70 tons per year NOx, 40.94 tons per year PM<sub>10</sub>, 59.85 tons per year SO<sub>2</sub>, 45.17 tons per year VOC, and 0.50 ton per year lead, on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in d)(5).

g) Miscellaneous Requirements

(1) None.