



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
SCIOTO COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 07-00543**

**Fac ID: 0773000080**

**DATE: 9/27/2005**

Sunoco Inc (RM)  
Melissa Essman  
1019 Haverhill-Ohio Furnace Rd  
Haverhill, OH 456299999

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

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

Sincerely,

*Michael W. Ahern*

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

PCHD



---

**Permit To Install  
Terms and Conditions**

**Issue Date: 9/27/2005  
Effective Date: 9/27/2005**

---

**FINAL PERMIT TO INSTALL 07-00543**

Application Number: 07-00543  
Facility ID: 0773000080  
Permit Fee: **\$4000**  
Name of Facility: Sunoco Inc (RM)  
Person to Contact: Melissa Essman  
Address: 1019 Haverhill-Ohio Furnace Rd  
Haverhill, OH 456299999

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**1019 Haverhill-Ohio Furnace Road  
Haverhill, Ohio**

Description of proposed emissions unit(s):  
**Physically modify Boiler 2001-UC to allow for simultaneous burning of HHC and LHC by-product fuels and to establish synthetic minor emission limits for Boilers 2001-UA, 2001-UB, and 2001 UE.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described 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

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

#### 1. Monitoring and Related Recordkeeping 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:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. 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:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. 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

Sunoco Inc (RM)  
PTI Application: 07-00543  
Issued: 9/27/2005

Facility ID: 0773000080

the appropriate Ohio EPA District Office or local air agency. 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 B.8 below if no deviations occurred during the quarter.

- iii. 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 appropriate Ohio EPA District Office or local air agency 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.
  - iv. If this permit is for an emissions unit located at a Title V facility, then 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.

## 2. 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 appropriate Ohio EPA District Office or local air agency 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).

## 3. 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.

#### 4. 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.

#### 5. Severability Clause

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.

#### 6. 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.

Sunoco Inc (RM)  
PTI Application: 07-00543  
Issued: 9/27/2005

Facility ID: 0773000080

## 7. 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.

## 8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that 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. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

## 9. Compliance Requirements

- a. 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.
- b. 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:
  - i. 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.
  - ii. 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.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or

Sunoco Inc (RM)  
PTI Application: 07-00543  
Issued: 9/27/2005

Facility ID: 0773000080

required under this permit.

- iv. 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.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency 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:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. 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.

#### 10. Permit-To-Operate Application

- a. If 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).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

#### 11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

**Sunoco Inc (RM)**  
**PTI Application: 07-00543**  
**Issued: 9/27/2005**

**Facility ID: 0773000080**

**12. 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.

Sunoco Inc (RM)  
PTI Application: 07-00543  
Issued: 9/27/2005

Facility ID: 0773000080

### **13. Permit-To-Install**

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

## **B. State Only Enforceable Permit-To-Install General Terms and Conditions**

### **1. Compliance Requirements**

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.

### **2. 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 appropriate Ohio EPA District Office or local air agency.
- 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 appropriate Ohio EPA District Office or local air agency. 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.)

### **3. Permit Transfers**

**Sunoco Inc (RM)**  
**PTI Application: 07-00543**  
**Issued: 9/27/2005**

**Facility ID: 0773000080**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

Sunoco Inc (RM)  
PTI Application: 07-00543  
Issued: 9/27/2005

Facility ID: 0773000080

#### **4. Authorization To Install or Modify**

If applicable, authorization to install or modify any new or existing 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 modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. 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.

#### **5. Construction of New Sources(s)**

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.

#### **6. 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.

#### **7. 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).

Sunoco Inc (RM)  
 PTI Application: 07-00543  
 Issued: 9/27/2005

Facility ID: 0773000080

**8. Construction Compliance Certification**

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

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.

**C. Permit-To-Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)  
 TOTAL PERMIT TO INSTALL 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

13

**Sunoco Inc (RM)**  
**PTI Application: 07-00543**  
**Issued: 9/27/2005**

**Facility ID: 0773000080**

**Sunoco Inc (RM)**  
**PTI Application: 07-00543**  
**Issued: 9/27/2005**

**Facility ID: 0773000080**

**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

**A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions**

None

**B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions**

None

Sunoco Inc (RM)  
PTI Application: 07-00512  
Issue

Facility ID: 0773000080

Emissions Unit ID: B004

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B004 - 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	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)
modification to establish synthetic minor emission limits	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-31-05(C)
Terms and conditions in this permit supercede those identified in PTI #07-00240 issued .	OAC rule 3745-17-10(C)(1)
	OAC rule 3745-18-79(B)(2)

Emissions Unit ID: B004

Applicable Emissions Limitations/Control Measures	See section A.II below.
Volatile organic compound emissions shall not exceed 1.0 pound per hour and 4.2 tons per year.	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
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).	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 less than 10 microns (PM <sub>10</sub> ) shall not exceed 40.94 tons per year.*	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.
Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 59.85 tons per year.*	Sulfur dioxide emissions shall not exceed 0.6 pound per mmBtu of actual heat input.
Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 570.70 tons per year.*	See section A.I.2.c below.
Carbon monoxide (CO) emissions shall not exceed 195.72 tons per year.*	
Volatile organic compound emissions shall not exceed 45.17 tons per year.*	
Lead emissions shall not exceed 0.50 ton per year.*	
* as a rolling, 12-month summation from Boilers B004, B005, B006 and B010 combined.	

## 2. Additional Terms and Conditions

- 2.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.
- 2.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.
- 2.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.

## II. 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:

Emissions Unit ID: B004

- 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 sections A.III.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 sections A.III.1 for B004, B005, B006, and B010; and
- S = percent sulfur in each fuel as determined in sections A.III.1 for B004, B005, B006, and B010.

### III. Monitoring and/or Record keeping 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.

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, ash content, and sulfur content of natural gas, #2 fuel oil, and #6 fuel oil.

Each natural gas fuel batch is defined by the most recent analysis received from the

Emissions Unit ID: **B004**

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 fuel (weight % );
  - d. The sulfur content of each fuel (weight % or gr/100 dscf);
  - 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 Section A.III.1 above. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, as defined in Section A.III.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.

#### **IV. 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.

Sunoco Inc (RM)  
PTI Application: 07-00512  
Issue

Facility ID: 0773000080

Emissions Unit ID: B004

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 Part 1 - General Term and Condition A.1.c of this permit.

## V. 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)

Sunoco Inc (RM)  
PTI Application: 07-00512  
Issue

Facility ID: 0773000080

Emissions Unit ID: B004

- 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 Section A.III.5.

## **VI. Miscellaneous Requirements**

25

**Sunoco Inc (RM)**

**PTI Application: 07 00513**

**Issue**

**Facility ID: 0773000080**

**Emissions Unit ID: B004**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B004 - 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  modification to establish synthetic minor emission limits		

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

27

**Sunco**

**PTI A**

**Issued: 9/27/2005**

Emissions Unit ID: **B004**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B005 - 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	OAC rule 3745-31-05(A)(3)
modification to establish synthetic minor emission limits	OAC rule 3745-17-07(A)
Terms and conditions in this permit supercede those identified in PTI #07-00240 issued .	OAC rule 3745-31-05(C)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-17-10(C)(1)

	Applicable Emissions <u>Limitations/Control Measures</u>	
OAC 3745-18-79(B)(2) rule	Volatile organic compound emissions shall not exceed 1.0 pound per hour and 4.2 tons per year.	* as a rolling, 12-month summation from Boilers B004, B005, B006 and B010 combined. See section A.II below.
40 CFR Part 63, Subpart EEE	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).	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	Particulate emissions less than 10 microns (PM <sub>10</sub> ) shall not exceed 40.94 tons per year.*	Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input when burning only natural gas and/or #2 fuel oil
	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 59.85 tons per year.*	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.
	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 570.70 tons per year.*	Sulfur dioxide emissions shall not exceed 0.6 pound per mmBtu of actual heat input.
	Carbon monoxide (CO) emissions shall not exceed 195.72 tons per year.*	See section A.I.2.c below.
	Volatile organic compound emissions shall not exceed 45.17 tons per year.*	
	Lead emissions shall not exceed 0.50 ton per year.*	

Emissions Unit ID: B005

## 2. Additional Terms and Conditions

- 2.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.
- 2.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.
- 2.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.

## II. 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 sections A.III.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 sections A.III.1 for B004, B005, B006, and B010; and
- S = percent sulfur in each fuel as determined in sections A.III.1 for B004, B005, B006, and B010.

### III. Monitoring and/or Record keeping 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.

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, ash content, and sulfur content of natural gas, #2 fuel oil, and #6 fuel oil.

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 fuel (weight % );
  - d. The sulfur content of each fuel (weight % or gr/100 dscf);
  - 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 Section A.III.1 above. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, as defined in Section A.III.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.

#### IV. 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

Emissions Unit ID: **B005**

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 Part 1 - General Term and Condition A.1.c of this permit.

## V. 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

Sunoco Inc (RM)  
PTI Application: 07-00512  
Issue

Facility ID: 0773000080

Emissions Unit ID: B005

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 Section A.III.5.

## VI. Miscellaneous Requirements

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B005 - 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  modification to establish synthetic minor emission limits		

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

V. Testing Requirements  
None

VI. Miscellaneous Requirements  
None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	pressure control;	(f) removal of capability to fire No. 2 fuel oil and No. 6 fuel oil.
B006 - 191 mmBtu per hour boiler (2001-UC) fired with: light hydrocarbon by-product fuel; heavy hydrocarbon by-product fuel; and/or natural gas;	(b) replacement of existing fuel train's atomizing steam control with a differential pressure control;	Terms and conditions in this permit supercede those identified in PTI #07-00240 issued .
Modification to physically modify 2001-UC to simultaneously burn HHC and LHC:	(c) replacement of existing burner, registers, and windbox with a low NO <sub>x</sub> burner;	
(a) installation of second fuel train with atomizing steam differential	(d) replacement of existing natural gas ring with distribution nozzles; and	
	(e) modification of the boiler tubes;	

Sunoco Inc (RM)  
 PTI Application: 07-00512  
 Issue

Facility ID: 0773000080

Emissions Unit ID: B006

<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
OAC rule 3745-31-03(A)(3)	Volatile organic compound emissions shall not exceed 1.0 pound per hour.
OAC rule 3745-17-07(A)	Sulfur dioxide emissions shall not exceed 11.07 pounds per hour.
OAC rule 3745-17-10(B)(1)	Sulfur dioxide emissions shall not exceed 0.6 pounds per mmBtu of actual heat input.
OAC rule 3745-17-10(C)(1)	Carbon monoxide emissions shall not exceed 14.28 pounds per hour.
OAC rule 3745-31-05(C)	Particulate emissions shall not exceed 11.35 pounds per hour.
40 CFR Part 60, Subparts A and Db	Particulate matter less than 10 microns (PM <sub>10</sub> ) shall not exceed 9.79 pounds per hour.
OAC rule 3745-31-05(C)	Lead emissions shall not exceed 0.002 pound per hour.
40 CFR Part 63, Subpart EEE	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).
40 CFR Part 63, Subpart EEE	Particulate emissions less than 10 microns (PM <sub>10</sub> ) shall not exceed 40.94 tons per year.*
40 CFR Part 63, Subpart EEE	Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 59.85 tons per year.*

**Sunoco  
PTI A  
Issued: 9/27/2005**

Emissions Unit ID: **B006**

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 570.70 tons per year.\*

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.

Carbon Monoxide (CO) emissions shall not exceed 195.72 tons per year.\*

Volatile Organic Compound emissions shall not exceed 45.17 tons per year.\*

Nitrogen oxides emissions shall not exceed 0.2 lb/mmBtu of actual heat input when burning only natural gas.

Lead emissions shall not exceed 0.50 ton per year.\*

See sections A.I.2.c through A.I.2.f below.

See section A.I.2.g below.

\* as a rolling, 12-month summation from Boilers B004, B005, B006 and B010 combined.

See section A.II below.

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

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

Particulate emissions

## 2. Additional Terms and Conditions

- 2.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.
- 2.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.
- 2.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:
- $$\text{Nitrogen Oxides emission limit (lb/MMBTU)} = \frac{[0.2 \text{ lb/MMBTU}] * \text{heat input from natural gas (MMBTU)} + [0.4 \text{ (lb/MMBTU)} * \text{heat input from by-product fuels (MMBTU)}]}{[\text{heat input from natural gas (MMBTU)} + \text{heat input from by-product fuels (MMBTU)}]}$$
- 2.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.
- 2.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.
- 2.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

Emissions Unit ID: B006

relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- 2.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.

## II. 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 sections A.III.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 sections A.III.1 for B004, B005, B006, and B010;and
- S = percent sulfur in each fuel as determined in sections A.III.1 for B004, B005,

**Sunoco Inc (RM)**  
**PTI Application: 07 00512**  
**Issue**

**Facility ID: 0773000080**

**Emissions Unit ID: B006**

B006, and B010.

### III. Monitoring and/or Record keeping 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.

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, ash content, and sulfur content 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 fuel (weight % );
- d. The sulfur content of each fuel (weight % or gr/100 dscf);
- 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 Section A.III.1 above. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, as defined in Section A.III.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

Emissions Unit ID: B006

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 60.48b(b) & (d)]  
The permittee shall install, operate, and maintain equipment to continuously monitor and record nitrogen oxides emissions from boiler 2001-UC (emissions unit B006) in pounds per mmBtu. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.
- [40 CFR 60.48b(c)]  
The permittee shall operate the continuous emissions monitoring system (CEMS) and record data during all periods of operation except for continuous monitoring systems breakdowns and repairs. Data shall be recorded during calibration checks, zero adjustments, and span adjustments.
- [40 CFR 60.48b(e)(2)]  
The permittee shall operate the CEMS with a NO<sub>x</sub> span value of 500 ppm.
7. Each CEMS consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

8. 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.
9. [40 CFR 60.48b(f)]  
When NO<sub>x</sub> emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, the permittee shall obtain emissions data by using standby monitoring systems, U. S. EPA Method 7 or 7a of 40 CFR Part 60, Appendix A, or other approved reference methods to provide data for a minimum of 75% of the operating hours in a day, in at least 22 out of 30 successive days of operation.
10. [40 CFR 60.49b(g)]  
The permittee shall maintain records of the following data obtained by the NO<sub>x</sub> CEMS for each operating day:
  - a. calendar date;
  - b. emissions of nitrogen oxides in pounds per mmBtu actual heat input on an hourly average basis;
  - c. emissions of nitrogen oxides in pounds per mmBtu actual heat input on a rolling, 30-day average basis;
  - d. identification of all days where the rolling, 30-day average NO<sub>x</sub> emission rate exceeds the 0.2 pound per mmBtu emission limitation, the reason for the excess emissions and a description of the corrective actions taken;
  - e. identification of operating days for which sufficient NO<sub>x</sub> emissions data has not been obtained, the reason for not obtaining sufficient data, and a description of the corrective actions taken;
  - f. identification of all periods of time which emissions data has been excluded from the calculation of the average emission rate and the reason for excluding the data;
  - g. a record of the "F" factor used in the calculation of the rolling, 30-day average NO<sub>x</sub> emission rate and the method used to determine the "F" factor;
  - h. identification of the times when NO<sub>x</sub> concentration exceeded the span of the continuous monitoring system;
  - i. description of any modifications to the CEMS that could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3 of 40 CFR Part 60, Appendix B;
  - j. results of daily CEMS drift tests and quarterly accuracy assessments as required by Procedure 1 of 40 CFR Part 60, Appendix F; and

Emissions Unit ID: B006

- k. results of daily zero/span calibration checks and magnitude of manual calibration adjustments.
11. [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.
12. 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.

#### IV. 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 Part 1 - General Term and Condition A.1.c of this permit.
5. [40 CFR 60.49b(i)]

The permittee shall submit a semiannual report in accordance with 40 CFR 60.49b(w) containing the information included in section A.III.10 above. The semiannual report shall be postmarked within 30 days of the end of the last calendar month of the 6 month reporting period.

6. The semiannual report shall also document any continuous NOx CEMS downtime while boiler 2001-UC (emissions unit B006) was on line (date, time, duration and reason), along with any corrective action(s) taken. The permittee shall provide the boiler 2001-UC (emissions unit B006) operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of boiler 2001-UC (emissions unit B006) and control equipment malfunctions. The total operating time of boiler 2001-UC (emissions unit B006) and the total operating time of the analyzer while boiler 2001-UC (emissions unit B006) was on line shall also be included in the quarterly report.
- 7 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

## V. 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 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 A.V.2. and ongoing compliance shall be demonstrated with the sulfur content analysis in Section A.III.2 and through the record keeping in Section A.III.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 A.V.2. and ongoing compliance shall be demonstrated with the ash content analysis in Section A.III.2 and through the record keeping in Section A.III.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 A.V.2. and ongoing compliance shall be demonstrated with the ash content

analysis in Section A.III.2 and through the record keeping in Section A.III.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

Emissions Unit ID: **B006**

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 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 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:

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

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 Section A.V.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

**Sunoco Inc (RM)****PTI Application: 07-00512****Issue:****Facility ID: 0773000080****Emissions Unit ID: B006**

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.

## **VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>B006 - 191 mmBtu per hour boiler (2001-UC) fired with: light hydrocarbon by-product fuel; heavy hydrocarbon by-product fuel; and/or natural gas;</p> <p>Modification to physically modify 2001-UC to simultaneously burn HHC and LHC</p>		

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

Sunoco  
 PTI A  
 Issued: 9/27/2005

Emissions Unit ID: **B010**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	Terms and conditions in this permit supercede those identified in PTI #07-00240 issued .	<u>Applicable Rules/Requirements</u>
B010 - 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		OAC rule 3745-31-05(A)(3)
modification to establish synthetic minor emission limits and to correct equipment description to remove heavy hydrocarbon by-product fuel		OAC rule 3745-31-05(C)

Sunoco Inc (RM)  
 PTI Application: 07 00512  
 Issue

Facility ID: 0773000080

Emissions Unit ID: **B010**

Applicable Emissions  
Limitations/Control Measures

OAC rule 3745-18-06

Volatile organic compound emissions shall not exceed 1.0 pound per hour and 4.2 tons per year.

40 CFR Part 63, Subpart EEE

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

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.

Particulate emissions less than 10 microns (PM<sub>10</sub>) shall not exceed 40.94 tons per year.\*

OAC rule 3745-17-07(A)

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 59.85 tons per year.\*

Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 570.70 tons per year.\*

OAC rule 3745-17-10(B)(1)

Carbon monoxide (CO) emissions shall not exceed 195.72 tons per year.\*

Volatile organic compound emissions shall not exceed 45.17 tons per year.\*

OAC rule 3745-17-10(C)(1)

Lead emissions shall not exceed 0.50 ton per year.\*

\* as a rolling, 12-month summation from Boilers B004, B005, B006 and B010 combined.

See section A.II below.

**Sunoco**  
**PTI A**  
**Issued: 9/27/2005**

Emissions Unit ID: **B010**

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

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. This limit was calculated from curve P-1 of Figure I.

The emission limitation specified by this rule is equivalent to the emission limitation established by OAC rule 3745-31-05(A)(3).

See Section A.1.2.c below.

## 2. Additional Terms and Conditions

- 2.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.
- 2.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.
- 2.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.

## II. 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 sections A.III.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 sections A.III.1 for B004, B005, B006, and B010; and
- S = percent sulfur in each fuel as determined in sections A.III.1 for B004, B005, B006, and B010.

### III. Monitoring and/or Record keeping 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.

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, ash content, and sulfur content of natural gas, #2 fuel oil, and #6 fuel oil.

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 fuel (weight % );
  - d. The sulfur content of each fuel (weight % or gr/100 dscf);
  - 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 Section A.III.1 above. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, as defined in Section A.III.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

Emissions Unit ID: B010

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.

#### IV. 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 Part 1 - General Term and Condition A.1.c of this permit.

## V. 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

Emissions Unit ID: **B010**

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 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 Section A.III.5.

**VI. Miscellaneous Requirements**

None

## B. State Only Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>B010 - 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</p> <p>modification to establish synthetic minor emission limits</p>		

### 2. Additional Terms and Conditions

2.a None

### II. Operational Restrictions

None

### III. Monitoring and/or Record keeping Requirements

None

### IV. Reporting Requirements

None

**Sunoco Inc (RM)**  
**PTI Application: 07 00512**  
**Issue**

**Facility ID: 0773000080**

**Emissions Unit ID: B010**

**V. Testing Requirements**  
None

**VI. Miscellaneous Requirements**  
None