

Facility ID: 0857040692 Issuance type: Final State Permit To Operate

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In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

\*\*\*THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION\*\*\*

Facility ID: 0857040692 Emissions Unit ID: B002 Issuance type: Final State Permit To Operate

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**Part II - Special Terms and Conditions**

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
  - (a) None.

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
B002 - Natural Gas and No. 2 Oil Fired Boiler No. 2 Rated at 52 MMBTU/hr Heat Input	OAC rule 3745-31-05(A)(3) PTI 08-04743	Particulate emissions (PE) from this emissions unit shall not exceed 0.014 lb/mmBtu.  PE from emissions units B001, B002, B003 and B004 shall not exceed 1.6 tons per year (TPY).  Organic compound (OC) emissions from this emissions unit shall not exceed 0.011 lb/mmBtu.  OC emissions from emissions units B001, B002, B003 and B004 shall not exceed 1.9 TPY. Nitrogen oxides (NOx) emissions from this emissions unit shall not exceed 0.14 lb/mmBtu.  NOx emissions from emissions units B001, B002, B003 and B004 shall not exceed 19.8 TPY.  Carbon monoxide (CO) emissions from this emissions unit shall not exceed 0.083 lb/mmBtu.  CO emissions from emissions units B001, B002, B003 and B004 shall not exceed 14.7 TPY. Sulfur dioxide (SO2) emissions from this emissions unit shall not exceed 0.50 lb/mmBtu.  SO2 emissions from emissions units B001, B002, B003 and B004 shall not exceed 11.8 TPY.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), 3745-21-08(B) and 3745-23-06(B). Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 60% opacity. The emission limitation specified by these rules are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). See A.2.c.
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-10(B)(1) OAC rule 3745-18-06(D)	
	OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)	

**2. Additional Terms and Conditions**

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of natural gas or No. 2 fuel oil, a sulfur content limitation for No. 2 fuel oil, and the emission limitations listed in term A.1. above.

The lb/mmBtu heat input emission limitations, except for SO<sub>2</sub>, are based on the emissions units' potentials to emit. Therefore, no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with these emission limitations.

The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology (BAT) established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, it is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

**B. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.50 lb/mmBtu of actual heat input and the sulfur content limitation for No. 2 fuel oil of less than or equal to 0.5 weight percent sulfur.
3. The monthly No. 2 fuel oil usage rate for this emissions unit shall not exceed 27,500 gallons.
4. The monthly natural gas usage rate for this emissions unit shall not exceed 27.5 million cubic feet (mmcf).

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)]. A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

c. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.

2. For each day during which the permittee burns a fuel other than natural gas or No. 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
3. The permittee shall maintain monthly records of the following information for emissions units B001, B002, B003 and B004:
  - a. The total combined quantity of No. 2 fuel oil burned, in gallons.
  - b. The total combined quantity of natural gas burned, in mmcf.

**D. Reporting Requirements**

1. The permittee shall notify the Director (the appropriate local air agency or District Office) in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil.
2. The permittee shall notify the Director (the appropriate local air agency or District Office) in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the record keeping requirements from C.1 above.
3. The permittee shall notify the Director (the appropriate local air agency or District Office) in writing of any record which shows a deviation of the allowable monthly No. 2 fuel oil and/or natural gas usage limitation.
4. The notifications identified in terms D.1, D.2 and D.3 shall include a copy of such record and shall be sent to the Director (the appropriate local air agency or District Office) within 45 days after the deviation occurs.

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation(s):  
PE from this emissions unit shall not exceed 0.014 lb/mmBtu.  
  
Applicable Compliance Method(s):  
The emission limitation is based on multiplying the emission factor 2 lbs PE/1000 gal No. 2 fuel oil (AP-42, Table 1.3-1, 9/98) by 1,000,000 Btu/mmBtu and dividing by the heat content of No. 2 fuel oil (140,000 Btu/gal).  
  
If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.
  - b. Emission Limitation(s):  
PE from emissions units B001, B002, B003 and B004 shall not exceed 1.6 TPY.  
  
Applicable Compliance Method(s):  
Compliance with the emission limitation is determined as follows:
    - i. Multiply the emission factor 2 lbs PE/1000 gal No. 2 fuel oil (AP-42, Table 1.3-1, 9/98) by the quantity of No. 2 fuel oil burned, in gallons, and divide by 2,000 lbs/ton.
    - ii. Multiply the emission factor 7.6 lbs PE/mmcf natural gas (AP-42, Table 1.4-2, 7/98) by the quantity of natural gas burned, in mmcf, and divide by 2,000 lbs/ton
    - iii. Sum i + ii
  - c. Emission Limitation(s):  
OC emissions from this emissions unit shall not exceed 0.011 lb/mmBtu.  
  
Applicable Compliance Method(s):  
The emission limitation is based on dividing the emission factor 11 lbs OC/mmcf natural gas (AP-42, Table 1.4-2, 7/98) by the heat content of natural gas (1,015 mmBtu/mmcf).  
  
If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.
  - d. Emission Limitation(s):  
OC emissions from emissions units B001, B002, B003 and B004 shall not exceed 1.9 TPY.  
  
Applicable Compliance Method(s):
    - i. Multiply the emission factor 0.56 lb OC/1000 gal No. 2 fuel oil (AP-42, Table 1.3-3, 9/98) by the quantity of No. 2 fuel oil burned, in gallons, and divide by 2,000 lbs/ton.
    - ii. Multiply the emission factor 11 lbs OC/mmcf natural gas (AP-42, Table 1.4-2, 7/98) by the quantity of natural gas burned, in mmcf, and divide by 2,000 lbs/ton
    - iii. Sum i + ii
  - e. Emission Limitation(s):  
NOx emissions from this emissions unit shall not exceed 0.14 lb/mmBtu.  
  
Applicable Compliance Method(s):  
The emission limitation is based on multiplying the emission factor 20 lbs NOx/1000 gal No. 2 fuel oil (AP-42, Table 1.3-1, 9/98) by 1,000,000 Btu/mmBtu and dividing by the heat content of No. 2 fuel oil (140,000 Btu/gal).  
  
If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.
  - f. Emission Limitation(s):  
NOx emissions from emissions units B001, B002, B003 and B004 shall not exceed 19.8 TPY.  
  
Applicable Compliance Method(s):  
Compliance with the emission limitation is determined as follows:
    - i. Multiply the emission factor 20 lbs NOx/1000 gal No. 2 fuel oil (AP-42, Table 1.3-1, 9/98) by the quantity of No. 2 fuel oil burned, in gallons, and divide by 2,000 lbs/ton.
    - ii. Multiply the emission factor 100 lbs NOx/mmcf natural gas (AP-42, Table 1.4-1, 7/98) by the quantity of natural gas burned, in mmcf, and divide by 2,000 lbs/ton.
    - iii. Sum i + ii
  - g. Emission Limitation(s):  
CO emissions from this emissions unit shall not exceed 0.083 lb/mmBtu.  
  
Applicable Compliance Method(s):  
The emission limitation is based on dividing the emission factor 84 lbs CO/mmcf natural gas (AP-42, Table 1.4-1, 7/98) by the heat content of natural gas (1,015 mmBtu/mmcf).  
  
If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.
  - h. Emission Limitation(s):  
CO emissions from emissions units B001, B002, B003 and B004 shall not exceed 14.7 TPY.  
  
Applicable Compliance Method(s):

i. Multiply the emission factor 5 lbs CO/1000 gal No. 2 fuel oil (AP-42, Table 1.3-1, 9/98) by the quantity of No. 2 fuel oil burned, in gallons, and divide by 2,000 lbs/ton.

ii. Multiply the emission factor 84 lbs CO/mmcf natural gas (AP-42, Table 1.4-1, 7/98) by the quantity of natural gas burned, in mmcf, and divide by 2,000 lbs/ton.

iii. Sum i + ii

i. Emission Limitation(s):

SO2 emissions from this emissions unit shall not exceed 0.50 lb/mmBtu.

Applicable Compliance Method(s):

Compliance shall be demonstrated in accordance with the record keeping requirements specified in Section C.1 and shall be determined in accordance with the following formula, as specified in OAC rule 3745-18-04(F):

$$ER = (1,000,000) / H \times D \times S \times 1.974$$

where: ER = the emission rate in pounds of SO2/mmBtu;

H = the heat content of the No. 2 fuel oil in Btu/gallon;

D = the density of the No. 2 fuel oil in lbs/gallon; and

S = the decimal fraction of sulfur in the No. 2 fuel oil.

j. Emission Limitation(s):

SO2 emissions from emissions units B001, B002, B003 and B004 shall not exceed 11.8 TPY.

Applicable Compliance Method(s):

Compliance with the emission limitation is determined as follows:

i. Multiply the lb/mmBtu SO2 emission rate, as determined in E.1.i above, by the heat content of No. 2 fuel oil (140,000 Btu/gal), by the total combined quantity of No. 2 fuel oil burned, in gallons, and divide by 2x109.

ii. Multiply the emission factor 0.6 lbs SO2/mmcf natural gas (AP-42, Table 1.4-2, 7/98) by the quantity of natural gas burned, in mmcf, and divide by 2,000 lbs/ton.

iii. Sum i + ii

k. Emission Limitation(s):

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 60% opacity.

Applicable Compliance Method(s):

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

**F. Miscellaneous Requirements**

1. None