

Facility ID: 1431071268 Issuance type: Draft State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

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.

[Go to Part II for Emissions Unit B001](#)  
[Go to Part II for Emissions Unit B002](#)

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

Facility ID: 1431071268 Emissions Unit ID: B001 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

**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>
27.5 MMBtu/hr. Natural gas/ No. 2 fuel oil fired boiler.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pound of particulate emissions per MMBTU actual heat input.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the boiler exhaust stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-35-07(B)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.0006 lb/mmBtu actual heat input, when burning natural gas.
		Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.21 lb/mmBtu actual heat input, when burning No. 2 fuel oil.
		Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 0.10 lb/mmBtu actual heat input, when burning natural gas.
		Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 0.14 lb/mmBtu actual heat input, when burning No. 2 fuel oil.

See term A.2.a, A.2.b, B.1 and B.2

**2. Additional Terms and Conditions**

- (a) The annual emissions of sulfur dioxide from emissions units B001 and B002 combined, shall not exceed 0.6 ton based on a rolling, 12-month summation. The sulfur dioxide emitted during the first full calendar month after permit issuance shall be added to the sulfur dioxide emission total from the previous 11 months of operation to begin the rolling, 12-month summation.  
 The annual emissions of nitrogen oxides from emissions units B001 and B002, combined shall not exceed 10.0 tons based on a rolling, 12-month summation. The nitrogen oxides emitted during the first full calendar month after permit issuance shall be added to the nitrogen oxides emission total from the previous 11 months of operation to begin the rolling, 12-month summation.

**B. Operational Restrictions**

1. The permittee operates two natural gas/No. 2 fuel oil boilers identified by Ohio EPA IDs 1431071268 B001 and B002. B001 and B002 each have a maximum rated capacity of 27.5 MMBTU/hr. The permittee shall be restricted to the following annual usage limits:
  - a. The maximum annual No. 2 fuel oil usage rate for emissions units B001 and B002 combined, shall not exceed 40,000 gallons per rolling, 12-month period.
  - b. The maximum annual natural gas usage rate for emissions units B001 and B002 combined, shall not exceed 200 million cubic feet based on a rolling, 12-month period.

2. This emissions unit is permitted for the use of natural gas and No. 2 fuel oil. Propane may be used as an alternative fuel in the event of a natural gas curtailment. If propane is used, the permittee shall record the usage amount(s) and add them to the monthly and annual natural gas usage totals. When calculating emissions from the usage amounts, the permittee shall use the emission factors for natural gas, as if natural gas had been used during these periods. No other fuels shall be used in this emissions unit.
3. The quality of the oil burned in this emissions unit shall meet the following specifications on an "as-received" basis:
  - a. A sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.21 pound sulfur dioxide per MMBTU actual heat input; and
  - b. Greater than 138,000 BTU per gallon of oil.

Compliance with the above-mentioned specifications shall be determined using the analytical results provided by the permittee or oil supplier for each shipment of oil.

**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 lbs/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, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries 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 lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

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. The permittee shall maintain monthly records of the following information for emissions unit B001 and B002 combined:
  - a. the total amount of natural gas and propane burned, in cubic feet;
  - b. the rolling, 12-month summation of the natural gas and propane usage, in cubic feet;
  - c. the total amount of No. 2 fuel oil burned, in gallons;
  - d. the rolling, 12-month summation of the No. 2 fuel oil usage, in gallons;
  - e. the calculated emission rate of sulfur dioxide, in tons;
  - f. the rolling, 12-month summation of the sulfur dioxide emission rates, in tons;
  - g. the calculated emission rate of nitrogen oxides, in tons; and
  - h. the rolling, 12-month summation of the nitrogen oxides emission rates, in tons.

**D. Reporting Requirements**

1. The permittee shall notify the Director (the appropriate District Office or local air agency) of any deviation of the No. 2 fuel oil specifications required in section B.1. of the terms and conditions above. The notification shall include a copy of the results of the fuel analyses and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the exceedance occurs.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of:
  - a. the rolling, 12-month, natural gas usage limitation;
  - b. the rolling, 12-month, No. 2 fuel oil usage limitation;
  - c. the rolling, 12-month, sulfur dioxide limitation; and
  - d. the rolling, 12-month, nitrogen oxides limitation.

Each report shall be in writing and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the exceedance occurs.

3. The permittee shall also submit annual reports which specify (a) the total natural gas usage, (b) the total No. 2 fuel oil usage, (c) the sulfur dioxide emissions, and (d) the nitrogen oxides emissions for emissions units B001 and B002 combined for the previous calendar year. These reports shall be submitted by January 31 of each year.

**E. Testing Requirements**

1. Emission Limitation(s):
 

0.02 pound of particulate emissions per mmBtu actual heat input

Applicable Compliance Method(s)

Compliance with the lb/mmBtu emission limitation may be determined by the following equation when burning natural gas:

$$0.0275 \text{ mmft}^3/\text{hr} \text{ (Max hourly gas burning capacity of emissions unit)} \times 7.6 \text{ LBS PM/mmft}^3 \text{ (AP-42 Natural Gas Combustion EF)} / 27.5 \text{ mmBTU/hr} \text{ (Max hourly heat input capacity of emissions unit)} = \text{LB PM/mmBTU}$$

Compliance with the lb/mmBtu emission limitation may be determined by the following equation when burning No.2 fuel oil:

$$0.194 \text{ Kgal/hr} \text{ (Max hourly oil burning capacity of emissions unit)} \times 2.0 \text{ LBS PM/Kgal} \text{ (AP-42 Fuel Oil Combustion EF)} / 27.5 \text{ mmBTU/hr} \text{ (Max hourly heat input capacity of emissions unit)} = \text{LB PM/mmBTU}$$

The emission limitations were based upon emission factors from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.3 (9/98) for fuel oil and Section 1.4 (7/98) for natural gas.

2. Emission Limitation(s):

0.0006 pound of SO<sub>2</sub>/mmBtu when burning natural gas

Applicable Compliance Method(s)

Compliance with the lb/mmBtu emission limitation may be determined by the following equation:

$$0.0275 \text{ mmft}^3/\text{hr} \text{ (Max hourly gas burning capacity of emissions unit)} \times 0.6 \text{ lb SO}_2/\text{mmft}^3 \text{ (AP-42 EF)} / 27.5 \text{ mmBTU/hr} \text{ (Max hourly heat input capacity of emissions unit)} = \text{LB SO}_2/\text{mmBtu}$$

The emission limitation was based upon the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.4 (7/98) for natural gas.

Emission Limitation(s):

0.21 lb SO<sub>2</sub>/mmBtu when burning No. 2 fuel oil

Applicable Compliance Method(s)

Compliance shall be based upon the record keeping and analysis requirements specified in term and conditions C.1. and C.2. of this permit, and the use of the equation in OAC rule 3745-18-04(F)(2) as follows:

$$(1 \times 10^6 \text{ Btu/mmBtu} / \text{Heat Content of Oil in Btu/Gal}) \times \text{Density of Oil in lbs/gal} \times \text{Sulfur Content of Oil (Percentage/100)} \times 1.974 = \text{lbs SO}_2/\text{mmBtu}$$

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission test performed in accordance with 40 CFR Part 60 Appendix A Methods 1-4, and 6.

3. Emission Limitation(s):

0.10 pound of NO<sub>x</sub>/mmBtu actual heat input when burning natural gas

Applicable Compliance Method(s)

Compliance with the lb/mmBtu emission limitation may be determined by the following equation when burning natural gas:

$$0.0275 \text{ mmft}^3/\text{hr} \text{ (Max hourly gas burning capacity of emissions unit)} \times 100 \text{ lbs NO}_x/\text{mmft}^3 \text{ (AP-42 EF)} / 27.5 \text{ mmBTU/hr} \text{ (Max hourly heat input capacity of emissions unit)} = \text{lb NO}_x/\text{mmBtu}$$

Emission Limitation(s):

0.15 pound of NO<sub>x</sub>/mmBtu actual heat input when burning No. 2 fuel oil

Applicable Compliance Method(s)

Compliance with the lb/mmBtu emission limitation may be determined by the following equation when burning No. 2 fuel oil:

$$0.194 \text{ Kgal/hr} \text{ (Max hourly oil burning capacity of emissions unit)} \times 20 \text{ lbs NO}_x/\text{Kgal} \text{ (AP-42 Fuel Oil Combustion EF)} / 27.5 \text{ mmBTU/hr} \text{ (Max hourly heat input capacity of emissions unit)} = \text{lb NO}_x/\text{mmBTU}$$

The emission limitations were based upon the emission factors from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.3 (9/98) for fuel oil and Section 1.4 (7/98) for natural gas.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission test performed in accordance with 40 CFR Part 60 Appendix A Methods 1-4, and 7 or 7A (as appropriate).

4. Emission Limitation(s):

0.6 ton SO<sub>2</sub>/year from B001 and B002 combined, based on a rolling 12-month summation.

Applicable Compliance Method(s):

Compliance with the annual SO<sub>2</sub> emission limitation may be determined by the following equation:

The emission limitations were based upon the emission factors from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.4 (7/98) for natural gas and Section 1.3 for No. 2 Fuel Oil (9/98).

[(Rolling, 12-month summation of natural gas usage in million cubic feet X 0.6 lb SO<sub>2</sub>/mmft<sup>3</sup>) + (Rolling, 12-

month summation of No. 2 fuel oil usage in Kgals X 28.4 lbs SO<sub>2</sub>/Kgal] / 2000 lbs/ton = tons SO<sub>2</sub>/year

5. Emission Limitation(s):

10 tons/year NO<sub>x</sub> from B001 and B002 combined based on a rolling 12-month summation.

Applicable Compliance Method(s):

Compliance with the annual NO<sub>x</sub> emission limitation may be determined by the following equation:

The emission limitations were based upon the emission factors from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.4 (7/98) for natural gas and Section 1.3 for No. 2 Fuel Oil (9/98).

[(Rolling, 12-month summation of natural gas usage in million cubic feet X 100 lbs NO<sub>x</sub>/mmft<sup>3</sup>) + (Rolling, 12-month summation of No. 2 fuel oil usage in Kgals X 20 lbs NO<sub>x</sub>/Kgal)] / 2000 lbs/ton = tons NO<sub>x</sub>/year

6. Compliance with the natural gas and No. 2 fuel oil usage limitations in section B.1. shall be demonstrated by the records required in section C.2. of these terms and conditions.

7. Compliance with the visible particulate emission limitations in OAC rule 3745-17-07(A) shall be demonstrated by the methods outlined in OAC rule 3745-17-03(B)(1).

F. **Miscellaneous Requirements**

1. The terms and conditions in sections A through F of this permit are federally enforceable, pursuant to OAC rule 3745-35-07(B).

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

Facility ID: 1431071268 Emissions Unit ID: B002 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

**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>
27.5 MMBtu/hr.Natural gas/ No. 2 fuel oil fired boiler.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pound of particulate emissions per MMBTU actual heat input.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the boiler exhaust stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-35-07(B)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.0006 lb/mmBtu actual heat input, when burning natural gas.  Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.21 lb/mmBtu actual heat input, when burning No. 2 fuel oil.itogen oxides (NO <sub>x</sub> ) emissions shall not exceed 0.10 lb/mmBtu actual heat input, when burning natural gas.
		Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 0.14 lb/mmBtu actual heat input, when burning No. 2 fuel oil.

See term A.2.a, A.2.b, B.1 and B.2

2. **Additional Terms and Conditions**

- (a) The annual emissions of sulfur dioxide from emissions units B001 and B002 combined, shall not exceed 0.6 ton based on a rolling, 12-month summation. The sulfur dioxide emitted during the first full calendar month after permit issuance shall be added to the sulfur dioxide emission total from the previous 11 months of operation to begin the rolling, 12-month summation. The annual emissions of nitrogen oxides from emissions units B001 and B002, combined shall not exceed 10.0 tons based on a rolling, 12-month summation. The nitrogen oxides emitted during the first full calendar month after permit issuance shall be added to the nitrogen oxides emission total from the previous 11 months of operation to begin the rolling, 12-month summation.

**B. Operational Restrictions**

1. The permittee operates two natural gas/No. 2 fuel oil boilers identified by Ohio EPA IDs 1431071268 B001 and B002. B001 and B002 each have a maximum rated capacity of 27.5 MMBTU/hr. The permittee shall be restricted to the following annual usage limits:
  - a. The maximum annual No. 2 fuel oil usage rate for emissions units B001 and B002 combined, shall not exceed 40,000 gallons per rolling, 12-month period.
  - b. The maximum annual natural gas usage rate for emissions units B001 and B002 combined, shall not exceed 200 million cubic feet based on a rolling, 12-month period.
2. This emissions unit is permitted for the use of natural gas and No. 2 fuel oil. Propane may be used as an alternative fuel in the event of a natural gas curtailment. If propane is used, the permittee shall record the usage amount(s) and add them to the monthly and annual natural gas usage totals. When calculating emissions from the usage amounts, the permittee shall use the emission factors for natural gas, as if natural gas had been used during these periods. No other fuels shall be used in this emissions unit.
3. The quality of the oil burned in this emissions unit shall meet the following specifications on an "as-received" basis:
  - a. A sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.21 pound sulfur dioxide per MMBTU actual heat input; and
  - b. Greater than 138,000 BTU per gallon of oil.

Compliance with the above-mentioned specifications shall be determined using the analytical results provided by the permittee or oil supplier for each shipment of oil.

**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 lbs/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, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries 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 lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

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. The permittee shall maintain monthly records of the following information for emissions unit B001 and B002 combined:
  - a. the total amount of natural gas and propane burned, in cubic feet;
  - b. the rolling, 12-month summation of the natural gas and propane usage, in cubic feet;
  - c. the total amount of No. 2 fuel oil burned, in gallons;
  - d. the rolling, 12-month summation of the No. 2 fuel oil usage, in gallons;
  - e. the calculated emission rate of sulfur dioxide, in tons;
  - f. the rolling, 12-month summation of the sulfur dioxide emission rates, in tons;
  - g. the calculated emission rate of nitrogen oxides, in tons; and
  - h. the rolling, 12-month summation of the nitrogen oxides emission rates, in tons.

**D. Reporting Requirements**

1. The permittee shall notify the Director (the appropriate District Office or local air agency) of any deviation of the No. 2 fuel oil specifications required in section B.1. of the terms and conditions above. The notification shall include a copy of the results of the fuel analyses and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the exceedance occurs.

2. The permittee shall submit deviation (excursion) reports which identify all exceedances of:

- a. the rolling, 12-month, natural gas usage limitation;
- b. the rolling, 12-month, No. 2 fuel oil usage limitation;
- c. the rolling, 12-month, sulfur dioxide limitation; and
- d. the rolling, 12-month, nitrogen oxides limitation.

Each report shall be in writing and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the exceedance occurs.

3. The permittee shall also submit annual reports which specify (a) the total natural gas usage, (b) the total No. 2 fuel oil usage, (c) the sulfur dioxide emissions, and (d) the nitrogen oxides emissions for emissions units B001 and B002 combined for the previous calendar year. These reports shall be submitted by January 31 of each year.

**E. Testing Requirements**

1. Emission Limitation(s):

0.02 pound of particulate emissions per mmBtu actual heat input

Applicable Compliance Method(s)

Compliance with the lb/mmBtu emission limitation may be determined by the following equation when burning natural gas:

$$0.0275 \text{ mmft}^3/\text{hr} (\text{Max hourly gas burning capacity of emissions unit}) \times 7.6 \text{ LBS PM/mmft}^3 (\text{AP-42 Natural Gas Combustion EF}) / 27.5 \text{ mmBTU/hr} (\text{Max hourly heat input capacity of emissions unit}) = \text{LB PM/mmBTU}$$

Compliance with the lb/mmBtu emission limitation may be determined by the following equation when burning No.2 fuel oil:

$$0.194 \text{ Kgal/hr} (\text{Max hourly oil burning capacity of emissions unit}) \times 2.0 \text{ LBS PM/Kgal} (\text{AP-42 Fuel Oil Combustion EF}) / 27.5 \text{ mmBTU/hr} (\text{Max hourly heat input capacity of emissions unit}) = \text{LB PM/mmBTU}$$

The emission limitations were based upon emission factors from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.3 (9/98) for fuel oil and Section 1.4 (7/98) for natural gas.

2. Emission Limitation(s):

0.0006 pound of SO<sub>2</sub>/mmBtu when burning natural gas

Applicable Compliance Method(s)

Compliance with the lb/mmBtu emission limitation may be determined by the following equation:

$$0.0275 \text{ mmft}^3/\text{hr} (\text{Max hourly gas burning capacity of emissions unit}) \times 0.6 \text{ lb SO}_2/\text{mmft}^3 (\text{AP-42 EF}) / 27.5 \text{ mmBTU/hr} (\text{Max hourly heat input capacity of emissions unit}) = \text{LB SO}_2/\text{mmBtu}$$

The emission limitation was based upon the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.4 (7/98) for natural gas.

Emission Limitation(s):

0.21 lb SO<sub>2</sub>/mmBtu when burning No. 2 fuel oil

Applicable Compliance Method(s)

Compliance shall be based upon the record keeping and analysis requirements specified in term and conditions C.1. and C.2. of this permit, and the use of the equation in OAC rule 3745-18-04(F)(2) as follows:

$$(1 \times 10^6 \text{ Btu/mmBtu} / \text{Heat Content of Oil in Btu/Gal}) \times \text{Density of Oil in lbs/gal} \times \text{Sulfur Content of Oil (Percentage/100)} \times 1.974 = \text{lbs SO}_2/\text{mmBtu}$$

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission test performed in accordance with 40 CFR Part 60 Appendix A Methods 1-4, and 6.

3. Emission Limitation(s):

0.10 pound of NO<sub>x</sub>/mmBtu actual heat input when burning natural gas

Applicable Compliance Method(s)

Compliance with the lb/mmBtu emission limitation may be determined by the following equation when burning natural gas:

$$0.0275 \text{ mmft}^3/\text{hr} (\text{Max hourly gas burning capacity of emissions unit}) \times 100 \text{ lbs NO}_x/\text{mmft}^3 (\text{AP-42 EF}) / 27.5 \text{ mmBTU/hr} (\text{Max hourly heat input capacity of emissions unit}) = \text{lb NO}_x/\text{mmBtu}$$

Emission Limitation(s):

0.14 pound of NO<sub>x</sub>/mmBtu actual heat input when burning No. 2 fuel oil

Applicable Compliance Method(s)

Compliance with the lb/mmBtu emission limitation may be determined by the following equation when burning No. 2 fuel oil:

0.194 Kgal/hr (Max hourly oil burning capacity of emissions unit) X 20 lbs NOx/Kgal (AP-42 Fuel Oil Combustion EF) / 27.5 mmBTU/hr (Max hourly heat input capacity of emissions unit) = lb NOx/mmBTU

The emission limitations were based upon the emission factors from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.3 (9/98) for fuel oil and Section 1.4 (7/98) for natural gas.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission test performed in accordance with 40 CFR Part 60 Appendix A Methods 1-4, and 7 or 7A (as appropriate).

4. Emission Limitation(s):

0.6 ton SO<sub>2</sub>/year from B001 and B002 combined, based on a rolling 12-month summation.

Applicable Compliance Method(s):

Compliance with the annual SO<sub>2</sub> emission limitation may be determined by the following equation:

The emission limitations were based upon the emission factors from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.4 (7/98) for natural gas and Section 1.3 for No. 2 Fuel Oil (9/98).

[(Rolling, 12-month summation of natural gas usage in million cubic feet X 0.6 lb SO<sub>2</sub>/mmft<sup>3</sup>) + (Rolling, 12-month summation of No. 2 fuel oil usage in Kgals X 28.4 lbs SO<sub>2</sub>/Kgal)] / 2000 lbs/ton = tons SO<sub>2</sub>/year

5. Emission Limitation(s):

10 tons/year NO<sub>x</sub> from B001 and B002 combined based on a rolling 12-month summation.

Applicable Compliance Method(s):

Compliance with the annual NO<sub>x</sub> emission limitation may be determined by the following equation:

The emission limitations were based upon the emission factors from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition Section 1.4 (7/98) for natural gas and Section 1.3 for No. 2 Fuel Oil (9/98).

[(Rolling, 12-month summation of natural gas usage in million cubic feet X 100 lbs NO<sub>x</sub>/mmft<sup>3</sup>) + (Rolling, 12-month summation of No. 2 fuel oil usage in Kgals X 20 lbs NO<sub>x</sub>/Kgal)] / 2000 lbs/ton = tons NO<sub>x</sub>/year

6. Compliance with the natural gas and No. 2 fuel oil usage limitations in section B.1. shall be demonstrated by the records required in section C.2. of these terms and conditions.

7. Compliance with the visible particulate emission limitations in OAC rule 3745-17-07(A) shall be demonstrated by the methods outlined in OAC rule 3745-17-03(B)(1).

F. **Miscellaneous Requirements**

1. The terms and conditions in sections A through F of this permit are federally enforceable, pursuant to OAC rule 3745-35-07(B).