

Facility ID: 1431050845 Issuance type: Final 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.

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

Facility ID: 1431050845 Emissions Unit ID: B004 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>
B004 - 25.125 mmBtu/hr natural gas-fired boiler with propane back-up	OAC rule 3745-31-05(A)(3) PTI 14-05937	Nitrogen oxide (NOx) emissions shall not exceed 5.27 pounds per hour (lb/hr) and 23.10 tons per year (TPY). Carbon monoxide (CO) emissions shall not exceed 3.60 lb/hr and 15.75 TPY.
	OAC rule 3745-17-07(A)(1)	The requirements of this rule also include compliance with OAC rule 3745-17-07(A)(1), 3745-17-10(B)(1), 3745-18-06(A), and OAC rule 3745-21-08(B). Visible particulate emissions from any stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.
	40 CFR Part 60, Subpart Dc	Emission standards do not apply to natural gas fired units that use propane backup.
	OAC rule 3745-31-03(A)(3)(b) OAC rule 3745-17-10(B)(1)	See term and condition A.2.b. Particulate emissions shall not exceed 0.020 lb/mmBtu.
	OAC rule 3745-21-08(B)	See term and condition A.2.e.
	OAC rule 3745-18-06(A)	This emissions unit is exempt from paragraphs (D), (F) and (G) during any calendar day in which natural gas is the only fuel burned. For purposes when propane is burned, the NSPS is applicable to this emissions unit as stated in paragraph (H) of OAC rule 3745-18-06.

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 propane and the emission limitations listed in section A.1 above.
The Best Available Technology (BAT) requirements under OAC rule 3745-31(A)(3) do not apply to the particulate emissions (PE), particulate matter emissions 10 microns and less in diameter (PM10), sulfur dioxide (SO2) and volatile organic compounds (VOC) from this air contaminant source since the uncontrolled potential to emit for PE, PM10, SO2 and VOC is less than ten tons per year.
The short term emission limitations in section A.1 are based on the emission unit's potential to emit. Therefore, no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with these emission limitations.
The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

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. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision 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.

B. Operational Restrictions

1. None

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:
- The total volume of natural gas, in millions of cubic feet (mmft³), burned in this emissions unit.
 - The total volume of propane (mmft³) burned in this emissions unit.

Also, during the first 12 calendar months of operation, the permittee shall record the cumulative fuel use for each calendar month.

D. Reporting Requirements

1. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
- construction date (no later than 30 days after such date);
 - actual start-up date (within 15 days after such date), including a description of each affected emissions unit, equipment manufacturer, and serial number of the equipment if available; and
 - date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Hamilton County Department of Environmental Services
250 William Howard Taft Road
Cincinnati, Ohio 45219

- The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or propane. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the deviation occurs.
- The permittee shall submit annual reports to Hamilton County Department of Environmental Services in writing which specify the NO_x and CO emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

E. Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitations:

Nitrogen oxide (NO_x) emissions shall not exceed 5.27 pounds per hour (lb/hr) and 23.10 tons per year (TPY).

Applicable Compliance Methods:

The emission limitations were based upon the emission factor for propane from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.5, Table 1.5-1 Liquefied Petroleum Combustion (10/96). Compliance with the lb/hr emission limitation may be determined using the following equations:

$$19 \text{ lbs of NO}_x/1000 \text{ gallons} \times 1 \text{ gallon}/90500 \text{ Btu} \times 1,000,000 \text{ Btu}/\text{mmBtu} \times 25.125 \text{ mmBtu}/\text{hr} = 5.27 \text{ lbs of NO}_x/\text{hr}.$$

$$5.27 \text{ lbs of NO}_x/\text{hr} \times 8760 \text{ hrs}/\text{year} \times \text{ton}/2000 \text{ lbs} = 23.10 \text{ TPY of NO}_x.$$

c. Emission limitation:

Carbon monoxide (CO) emissions shall not exceed 3.60 lb/hr and 15.75 TPY.

Applicable Compliance Methods:

The emission limitations were based upon the emission factor from manufacturer's specifications of 150 ppmv CO. Compliance with the lb/hr emission limitation may be determined using the following equations:

$$150/1,000,000 \times 1 \text{ lb-mol}/379.4 \text{ ft}^3 \times 28.01 \text{ lb of CO}/\text{lb-mol} \times 5412 \text{ ft}^3/\text{min} \times 60 \text{ min}/\text{hr} = 3.595 \text{ lbs of CO}/\text{hr}.$$

$$3.595 \text{ lbs of CO}/\text{hr} \times 8760 \text{ hrs}/\text{yr} \times \text{ton}/2000 \text{ lbs} = 15.746 \text{ TPY of CO}.$$

d. Emission limitation:

0.020 lb PE per mmBtu of actual heat input.

Applicable compliance method:

For the use of natural gas, compliance shall be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit

(25.125 mmBtu/hr).

For the use of propane, compliance shall be determined by multiplying the hourly propane burning capacity of the emissions unit (in 1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.5, Table 1.5-1 (revised 10/96) emission factor of 0.6 lb of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

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.

e. Emission limitation:
less than 10.0 tons per year PE/PM10.

Applicable compliance method:

The actual annual emissions rate shall be calculated by multiplying the actual annual fuel usage by the emissions factors from "Compilation of Air Pollutant Emission Factors", AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor for natural gas burning and AP-42, 5th Edition, Section 1.5, Table 1.5-1 (10/96) for propane burning and dividing by 2000 pounds per ton. PM10 emissions shall be assumed to be equivalent to PE.

f. Emission limitation:
less than 10.0 tons per year SO₂.

Applicable compliance method:

The actual annual emissions rate shall be calculated by multiplying the actual annual fuel usage by the emission factors from "Compilation of Air Pollutant Emission Factors", AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor for natural gas burning and AP-42, 5th Edition, Section 1.5, Table 1.5-1 (10/96) for propane burning and dividing by 2000 pounds per ton.

g. Emission limitation:
less than 10.0 tons per year VOC.

Applicable compliance method:

The actual annual emission rate shall be calculated by multiplying the actual annual fuel usage by the emissions factors from "Compilation of Air Pollutant Emission Factors", AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor for natural gas burning and AP-42, 5th Edition, Section 1.5, Table 1.5-1 (10/96) for propane burning and dividing by 2000 pounds per ton.

F. Miscellaneous Requirements

1. None