

Facility ID: 1409090278 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: 1409090278 Emissions Unit ID: B005 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>
B005 - 12.56 mmBtu/hour Cleaver Brooks Natural Gas and Oil-Fired Boiler #3, with low NOx burners	OAC rule 3745-31-05(A)(3)(b)	See term and condition A.2.a.
	OAC rule 3745-31-05(C) (PTI 14-05951)	See term and condition A.2.b.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pound per mmBtu of actual heat input.
	OAC rule 3745-18-06(D)	When burning Number 2 fuel oil, the emissions limitation specified by this rule is less stringent than the limitations established pursuant to 40 CFR Part 60, Subpart Dc.
	40 CFR Part 60, Subpart Dc	See Section B.2.
	OAC rule 3745-21-08(B)	See term and condition A.2.e.

2. Additional Terms and Conditions

- (a) The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions, particulate matter 10 microns or less in diameter (PE/PM10), nitrogen oxide (NOx), volatile organic compounds (VOC), and carbon monoxide (CO) emissions from this air contaminant source since the uncontrolled potential to emit for PE/PM10, NOx, VOC, and CO is less than ten tons per year.
 The permit for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) under OAC rule 3745-31-05(A)(3) for sulfur dioxide (SO2) emissions:
 - i. the maximum annual Number 2 fuel oil usage rate for this emissions unit shall not exceed 5,000 gallons per year.
 The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).
 The PE limitation specified in Section A.1 is greater than the emission unit's potential to emit. Therefore, no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with this emissions limitation.
 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. The permittee shall burn only natural gas and/or Number 2 fuel oil in this emissions unit.
2. The quality of Number 2 fuel oil received for burning in this emissions unit shall contain less than or equal to 0.5 weight percent sulfur.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the quantity and type of fuel combusted in this emissions unit during each operating day.
2. The permittee shall collect and record the following information annually for the purpose of determining annual SO₂ emissions:
 - a. the total number of gallons of Number 2 fuel oil combusted;
 - b. the total quantity of natural gas combusted in mmcf; and
 - c. the total SO₂ emissions from all fuels combusted, in tons, using the calculation methods provided in Section E.1 and replacing any voluntary restriction amounts with the actual amounts as recorded in (a) and (b) above.
3. Pursuant to NSPS 40 CFR Part 60.42c(h), the permittee shall maintain oil supplier certifications for the fuel oil received for burning in this emissions unit that contain the following information:
 - a. The name of the oil supplier;
 - b. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil pursuant to 40 CFR Part 60.41c; and
 - c. The sulfur content of the oil, in weight percent.

D. Reporting Requirements

1. Pursuant to the NSPS, the permittee is required to report the following information at the appropriate times (if the information has not already been reported):
 - a. construction date (no later than 30 days after such date);
 - b. actual start-up date (within 15 days after such date); and
 - c. 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, OH 45219

2. The permittee shall notify Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or Number 2 fuel oil. The notification shall include a copy of such record and shall be sent to Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
3. The permittee shall submit quarterly reports to Hamilton County Department of Environmental Services of any exceedance of the fuel oil sulfur content limitation specified in Section B.2. If no exceedances occurred, the permittee shall state so in the report. The quarterly reports shall also contain records of the oil supplier certification for all fuel oil combusted during the reporting period including a certified statement by a responsible official that the certification records submitted represent all of the fuel oil combusted during the reporting period. The reports shall be submitted by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively).

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:
Emission Limitation:

Particulate emissions shall not exceed 0.020 pound 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 (mmBtu/hr).

For the use of Number 2 fuel oil, compliance shall be determined by multiplying the hourly fuel oil burning capacity of the emissions unit (in 1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs 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.
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:

If required, 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).

Emission Limitation:

The potential to emit is less than 10.0 tons per year of SO₂ based on a voluntary fuel oil restriction of 5000 gallons per year.

Applicable Compliance Method:

The annual SO₂ emission rate is based on a voluntary restriction on the potential to emit established through OAC rule 3745-31-05(C) from the combustion of Number 2 fuel oil. The annual SO₂ emission rate for both the combustion of natural gas and restricted fuel oil usage was calculated by the following equations using the information submitted by the permittee in PTI Application 14-05951, submitted on May 25, 2007:

For natural gas combustion:

$E = \text{heat input capacity of } 12.56 \text{ mmBtu/hour} \times 0.0006 \text{ lbs of SO}_2/\text{mmBtu per AP-42 Table 1.4-2 for natural gas combustion} \times 8760 \text{ hours}/(2000)$; and

For Number 2 fuel oil combustion:

$E = 71 \text{ lbs of SO}_2/1000 \text{ gals per AP-42 Table 1.3-1 for fuel oil combustion} \times 5000 \text{ gallons fuel oil per year}/(2000)$;

where E = Emission Rate (tons per year).

Emission Limitation:

The uncontrolled potential to emit is less than 10.0 tons per year of PE/PM₁₀.

Applicable Compliance Method:

The annual PE/PM₁₀ emissions rate is based on this emissions unit's uncontrolled potential to emit from the combustion of natural gas or Number 2 fuel oil. PM₁₀ emissions shall be assumed to be equivalent to PE. The annual PE/PM₁₀ emission rates were calculated by the following equations using the information submitted by the permittee in PTI Application 14-05951, submitted on May 25, 2007:

For natural gas combustion:

$E = \text{heat input capacity of } 12.56 \text{ mmBtu/hour} \times 0.007 \text{ lbs of PE/mmBtu per AP-42 Table 1.4-2 for natural gas combustion} \times 8760 \text{ hours}/(2000)$; and

For Number 2 fuel oil combustion:

$E = 2 \text{ lbs of PM}/1000 \text{ gals per AP-42 Table 1.3-1 for fuel oil combustion} \times 5000 \text{ gallons fuel oil per year}/(2000)$;

where E = Emission Rate (tons per year).

Emission Limitation:

The uncontrolled potential to emit is less than 10.0 tons per year of VOC.

Applicable Compliance Method:

The annual VOC emissions rate is based on this emissions unit's uncontrolled potential to emit from the combustion of natural gas or Number 2 fuel oil. The annual VOC emissions rate was calculated by the following equations using the information submitted by the permittee in PTI Application 14-05951, submitted on May 25, 2007:

For natural gas combustion:

$E = \text{heat input capacity of } 12.56 \text{ mmBtu/hour} \times 0.011 \text{ lbs of VOC/mmBtu per AP-42 Table 1.4-2 for natural gas combustion} \times 8760 \text{ hours}/(2000)$; and

For Number 2 fuel oil combustion:

$E = 0.252 \text{ lbs of TOC}/1000 \text{ gals per AP-42 Table 1.3-3 for fuel oil combustion} \times 5000 \text{ gallons fuel oil per year}/(2000)$;

where E = Emission Rate (tons per year).

Emission Limitation:

The uncontrolled potential to emit is less than 10.0 tons per year of CO.

Applicable Compliance Method:

The annual CO emission rate is based on this emissions unit's uncontrolled potential to emit from the combustion of natural gas or Number 2 fuel oil. The annual CO emission rate was calculated by the following equations using the information submitted by the permittee in PTI Application 14-05951, submitted on May 25, 2007:

For natural gas combustion:

E = heat input capacity of 12.56 mmBtu/hour x 0.082 lbs of CO/mmBtu per AP-42 Table 1.4-1 for natural gas combustion x 8760 hours/(2000)); and

For Number 2 fuel oil combustion:

E = 5 lbs of CO/1000 gals per AP-42 Table 1.3-1 for fuel oil combustion x 5000 gallons fuel oil per year/(2000));

where E = Emission Rate (tons per year).

Emission Limitation:

The uncontrolled potential to emit is less than 10.0 tons per year of NOx.

Applicable Compliance Method:

The annual NOx emission rate is based on this emissions unit's uncontrolled potential to emit from the combustion of natural gas or Number 2 fuel oil. The annual uncontrolled NOx emission rate was calculated by the following equations using the information submitted by the permittee in PTI Application 14-05951, submitted on May 25, 2007:

For natural gas combustion:

E = heat input capacity of 12.56 mmBtu/hour x 0.098 lbs of NOx/mmBtu per AP-42 Table 1.4-1 for natural gas combustion x 8760 hours/(2000)); and

For Number 2 fuel oil combustion:

E = 20 lbs of NOx/1000 gals per AP-42 Table 1.3-1 for fuel oil combustion x 5000 gallons fuel oil per year/(2000));

where E = Emissions Rate (tons per year).

Actual annual NOx emissions may be calculated by multiplying the uncontrolled NOx emissions above by 50% control efficiency for the use of low NOx burners in this emission unit.

Emission Limitation:

The sulfur content of the fuel oil shall not exceed 0.5 percent by weight.

Applicable Compliance Method:

Compliance with the fuel oil sulfur content limitation shall be demonstrated by the record of the fuel supplier certification required in term and condition C.3.

F. **Miscellaneous Requirements**

1. None