

Facility ID: 1318002733 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: 1318002733 Emissions Unit ID: P007 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>
P007 - Glass Bead Furnace No. 5 equipped with a heat exchanger, Air Transport System, and two (2) baghouses	OAC rule 3745-31-05(A)(3) PTI #13-04607 issued on 3/28/2006	Particulate emissions shall not exceed 0.07 pounds per hour and 0.31 tons per year.
	PTI #13-00426 issued on 5/16/1978	3.74 lbs/hour and 16.38 tons/year of NOx from the combustion of natural gas.
		3.13 lbs/hour and 13.71 tons/year of CO from the combustion of natural gas.
		0.29 lbs/hour and 1.27 tons/year of PE from the combustion of natural gas.
		0.42 lbs/hour and 1.84 tons/year of OC from the combustion of natural gas.
	OAC rule 3745-17-07(A)	Visible particulate emissions from each baghouse stack shall not exceed 10% opacity, as a 6-minute average, except as provided by rule. The visible emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**
 - (a) The hourly and annual emission limits for this emissions unit have been established at the emissions unit's potential to emit; therefore, monitoring, recordkeeping, and reporting are not needed for these limits.

B. Operational Restrictions

1. The permittee shall only burn natural gas as fuel in this emissions unit.
2. The permittee shall operate the furnace baghouse and air transport baghouse whenever this emissions unit is in operation.
3. The pressure drop across the air transport baghouse shall be maintained within the range of 1.0 - 6.0 inches of water while the emissions unit is in operation.
4. The pressure drop across the furnace baghouse shall be maintained within the range of 1.0 - 6.0 inches of water while the emissions unit is in operation.

C. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain daily records that document any time periods when any baghouse was not in service while the emissions unit was in operation.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouses while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drops across the baghouses on a daily basis.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland Division of Air Quality (Cleveland DAQ) within 30 days after the deviation occurs.
2. The permittee shall notify the Cleveland DAQ in writing of any record showing that any baghouse was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.
3. The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drops across the baghouses did not comply with the allowable ranges specified above. These reports shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
Emission Limitation:
0.07 lb/hr of Particulate Emissions

Applicable Compliance Method:
Compliance with the pound per hour limitation shall be determined as shown below in the one-time calculation for controlled Potential-to-Emit:

$$E = [(EF)*(P)*(1-CEATB)] + [(EF)*(P)*(1-CEFB)*(MT)]$$

Where:

- E = Potential short term emissions (0.07 lb/hr);
- EF = Emission factor from Chapter 11.15 ("Glass Manufacturing") AP-42, Fifth Edition, Volume I (1.32 lbs PE/ton glass cullet);
- P = Maximum tons of glass cullet processed per hour (3.5 tons/hr)
- CEATB = Control efficiency of the air transport baghouse (99.0%)
- CEFB= Control efficiency of the furnace baghouse (99.0%)
- MT = Amount of material transfer to furnace gas (50%)

If required by the Ohio EPA or Cleveland DAQ, compliance with allowable particulate emissions limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

Emission Limitation:
0.31 ton/year of Particulate Emissions

Applicable Compliance Method:
The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

Emission Limitation:
3.74 lbs/hr of NOx from the combustion of natural gas

Applicable Compliance Method:
Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.098 lb NOx/mmscf) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating (38.2) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBTU/mmscf.

If required by the Ohio EPA or Cleveland DAQ, compliance with allowable NOx limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A.

Emission Limitation:
16.38 tons/year of NOx from the combustion of natural gas

Applicable Compliance Method:
The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

Emission Limitation:
3.13 lbs/hr of CO from the combustion of natural gas

Applicable Compliance Method:
Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.082 lb CO/mmscf) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating (38.2) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBTU/mmscf.

If required by the Ohio EPA or Cleveland DAQ, compliance with allowable CO limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.

Emission Limitation:
13.71 tons/year of CO from the combustion of natural gas

Applicable Compliance Method:
The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating

schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

Emission Limitation:

0.29 lb/hr of PE from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.0075 lb PE/mmscf) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating (38.2) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBTU/mmscf.

If required by the Ohio EPA or Cleveland DAQ, compliance with allowable particulate emissions limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

Emission Limitation:

1.27 tons/year of PE from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

Emission Limitation:

0.42 lb/hr of OC from the combustion of natural gas

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor (0.011 lb OC/mmscf) from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating (38.2) of the natural gas-fired burner. Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 mmBTU/mmscf.

If required by the Ohio EPA or Cleveland DAQ, compliance with allowable OC limit shall be determined in accordance with U.S. EPA Reference Methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A.

Emission Limitation:

1.84 tons/year of OC from the combustion of natural gas

Applicable Compliance Method:

The annual limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

Emission Limitation:

Visible particulate emissions from each baghouse stack shall not exceed 10% opacity, as a 6-minute average

Applicable Compliance Method:

If required by the Ohio EPA or Cleveland DAQ, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA Reference Method 9.

F. Miscellaneous Requirements

1. None