

Facility ID: 0145000213 Issuance type: Title V Proposed Permit

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 III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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Facility ID: 0145000213 Issuance type: Title V Proposed Permit

Part II - Specific Facility Terms and Conditions

a State and Federally Enforceable Section

1. Emission Limitations

Pursuant to OAC rule 3745-31-05(C), total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Pursuant to OAC rule 3745-17-07(A), visible particulate emissions (PE) from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036 shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

2. Additional Terms and Conditions

- a. The permittee shall control NOx emissions from emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036 by using a selective catalytic reduction (SCR) unit.
- b. Pursuant to PTI 01-08046, as issued on March 14, 2002, the permittee shall control particulate emissions (PE) from emissions units P010, P011, P012 and P035 by using an electrostatic precipitator (ESP) (for emissions units P010, P011, P012 and P035, only PE from the crucible formation process are vented to the ESP and then directly to the SCR unit).
- c. A continuous emissions monitoring system (CEMS) malfunction is defined as any time in which the CEMS is not able to sample or analyze the gas stream exiting the SCR unit.
- d. A SCR malfunction is defined as any time that the SCR automatically shuts down due to an internal control system setting. A SCR malfunction will also include instances where the permittee manually determines that the SCR is not operating properly and must be shut down. The malfunction event will begin at the time of automatic shutdown of the SCR (as recorded by the SCR control system) or at the time malfunction requiring SCR shutdown is manually identified by the permittee.
- e. In the event of a CEMS malfunction, emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036 shall be shut down within one hour. Once the emissions unit(s) is (are) shut down, the emissions unit(s) shall remain shut down until the CEMS is no longer malfunctioning.
- f. In order to continue to operate the above emissions units during or after a CEMS malfunction, the permittee may develop and submit for pre-approval by the Ohio EPA, CDO an alternative compliance method for estimating the emissions from the arc fusion machines and large diameter lathes listed in Section A.2.e.
- g. CEMS Quality Assurance/ Quality Control

The permittee shall maintain a copy of the written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of NOx emissions in units of pounds per hour and tons per month. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the CEMS must be kept on site and available for inspection during regular office hours.
- h. CEMS Statement of Certification

The permittee shall maintain a copy of the certification of the continuous NOx monitoring system granted by the Ohio EPA, Central Office on April 10, 2002. This certification was granted upon determination by

the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(l) and 40 CFR Part 60, Appendix B, Performance Specification 2.

- i. In the event of an SCR malfunction, emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036 will be shut down immediately following completion of work-in-process. Work-in-process is defined as follows for each type of emissions unit:
 - i. production and repair lathes (B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P014, P015, P021, P032, and P036) - The current lathe pass (maximum of one hour of operation after SCR malfunction).
 - ii. crucible machines (P010, P011, P012, P035) - The crucible being fused inside the blockhouse at the time of the SCR malfunction.
- j. In the event that the SCR catalyst has degraded to the point that it needs to be replaced, the permittee is still authorized to operate emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036 for up to 60 days provided the following conditions are met:
 - i. the permittee has ordered replacement catalyst no later than 10 business days after the permittee has determined that the catalyst has irreversibly degraded below the acceptable activity level; and
 - ii. the permittee shall notify OEPA, CDO, DAPC within 5 business days upon determining the catalyst has irreversibly degraded; and
 - iii. emissions of NOx from the SCR do not exceed 210.7 tons per rolling, 12-month period; and
 - iv. emissions of NOx for each emissions unit do not exceed the limitations specified in the following table (These limitations are based on the maximum hourly MMBtu demand and on the SCR operating at 50% efficiency):

j. Emissions Unit NOx Emission Limitations (lbs/hr)

- B001 23.0
- B002 23.0
- B003 23.0
- B004 23.0
- B005 23.0
- B006 23.0
- B023 20.0
- B024 20.0
- B025 20.0
- B026 20.0
- B027 20.0
- B028 20.0
- B029 20.0

- j. B030 25.0
- B031 20.0
- P010 12.0
- P011 12.0
- P012 22.3
- P014 28.0
- P015 28.0
- P021 3.3
- P032 20.0
- P035 22.3
- P036 4.0

3. Operational Restrictions

None

4. Monitoring and Record Keeping Requirements

- a. The permittee shall maintain monthly records of the tons of NOx per month and rolling, 12-month NOx emissions calculated as the summation of the monthly NOx emissions as determined by the CEMS (Section A.4.b) and the NOx emissions during CEMS malfunctions (Section A.4.c).
- b. The permittee shall operate and maintain the CEMS to continuously monitor and record combined NOx emissions from emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the CEMS, including emissions of NOx in units of pounds per hour and tons per month, results of daily zero/span calibration checks and magnitude of manual calibration adjustments.

- c. The permittee shall collect and record the following information for each CEMS malfunction:
- The number of lathes operating.
 - The emissions unit ID for each arc fusion machine in operation.
 - The total duration of the CEMS malfunction, in hours.
 - The estimated NOx emissions from the lathes in operation calculated by multiplying the number of lathes in operation in Section A.4.c.i, by the total hours of the CEMS malfunctions in Section A.4.c.iii, by the maximum allowable emission rate of 15.0* lbs NOx/hr.
 - The estimated NOx emissions from the arc fusion machines** calculated using the following equation:

$$\{\text{arc fusion machine \#4 (P010)} * 7.2 \text{ lbs/hr}\} + \{\text{arc fusion machine \#5 (P011)} * 7.2 \text{ lbs/hr}\} + \{\text{arc fusion machine \#8 (P012)} * 14.0 \text{ lbs/hr}\} + \{\text{arc fusion machine \#9 (P035)} * 14.0 \text{ lbs/hr}\}.$$
 - The summation of the NOx emissions from the lathes and from the arc fusion machines, in lbs.

* Allowable emission rate for emissions unit B030.

** If an arc fusion machine is not in operation at the time of the CEMS malfunction then its emissions are assumed to be zero.

- d. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when any of the emissions units identified in Section A.1 are in operation and when the weather conditions allow, for any visible particulate emissions from the SCR unit stack serving these emissions units. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- the color of the emissions;
 - whether the emissions are representative of normal conditions;
 - if the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;
 - the total duration of any visible emission incident; and
 - any corrective actions taken to eliminate the visible emissions.

- d. Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when any of the emissions units identified in Section A.1 are in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

5. Reporting Requirements

- a. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month NOx emission limitation for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined.

The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.

- b. CEMS Data Reporting

The permittee must submit data for each CEMS (that meets the requirements of 40 CFR Part 60.13 and has received certification from Ohio EPA) to Ohio EPA, Central Office on a quarterly basis. The data presented in the quarterly reports shall reflect emissions units operations, monitoring availability, actual tons of NOx, and excess NOx emissions in units of pounds per hour and tons per rolling, 12-month period for the previous calendar quarter.

The permittee shall submit reports within one month following the end of each calendar quarter to the Ohio EPA, CDO documenting any CEMS downtime while any emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the time period the emissions units were in operation during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time for the emissions units and the total operating time of the analyzer while any emissions unit was on line shall also be included in the quarterly report.

- b. If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunctions. The total operating time for the emissions units and the total operating time of the analyzer while any emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

- c. CEMS Electronic Data Reporting, Summary Form

Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted

to the Ohio EPA, CDO within the schedule required in Part I, Section A.1.c.ii. of this PTI.

- d. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving these emissions units and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, CDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

6. Testing Requirements

a. Emission Limitation:

210.7 tons per year NOx emissions from the SCR unit stack for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:

Compliance shall be based on the record keeping in Section 4, Monitoring and Recordkeeping Requirements, terms 4.a through 4.d.

b. Emission Limitation:

Visible particulate emissions (PE) from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036 shall not exceed 20% opacity, as a 6-minute average, except as provided by OAC rule 3745-17-07.

Applicable Compliance Method:

If required by Ohio EPA and/or U.S. EPA, compliance shall be determined through visible emissions 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).

c. Relative Accuracy Test Audit

To ensure the validity of the data from the CEMS, the permittee shall certify the accuracy of the CEMS annually pursuant to provisions for a relative accuracy test audit (RATA) in 40 CFR Part 60, Appendix F.

7. Miscellaneous Requirements

- a. Ohio EPA has determined that the requirements specifically identified in the following list are not applicable, as the facility existed on the date of issuance of this permit.

List of Negative Declarations - Ohio and Federal Nonapplicable Requirements:

a. Emissions Unit Requirement

All emissions units OAC rule 3745-17-07(B)
 All emissions units OAC rule 3745-17-08(B)
 All emissions units OAC rule 3745-18-06(E)(2)
 All emissions units Subparts of 40 CFR Part 60
 All emissions units Subparts of 40 CFR Part 61
 All emissions units CAA Title IV
 All emissions units CAA sections 129,183(e and f), 328
 All emissions units CAA Title I, Part C
 All emissions units OAC rule 3745-17-09
 All emissions units OAC rule 3745-17-10
 All emissions units OAC rule 3745-17-12
 All emissions units OAC rule 3745-17-13
 All emissions units OAC rule 3745-17-14
 All emissions units OAC rule 3745-18-51
 All emissions units OAC rule 3745-21-07
 Facility-wide OAC rule 3745-21-11
 Facility-wide OAC Chapter 3745-24
 All emissions units OAC Chapter 3745-14
 All emissions units OAC Chapter 3745-16
 All emissions units OAC Chapter 3745-71

- b. This facility is subject to the applicable requirements specified in OAC Chapter 3745-25. In accordance with Ohio EPA Engineering Guide #64, the emission control action programs, as specified in OAC rule 3745-25-03, shall be developed and submitted within 60 days after receiving notification from the Ohio EPA.

- c. The permittee shall comply with all applicable provisions specified in 40 CFR Part 82, Subpart F as related to the operations at this facility.

- d. The following insignificant emissions units are located at this facility:

B018 - 58 hp natural gas-fired pump engine;
 B019 - 75 hp natural gas-fired pump engine;

- B020 - 600kW diesel emergency engine;
 B021 - 6.5 MMBtu/hr diesel emergency generator;
 B022 - 9.7 MMBtu/hr diesel emergency generator;
 L001 - 30-gallon solvent based parts cleaner;
 P005 - crucible sandblasters for machines 1, 2, 3, and 4;
 P018 - crucible sandblasters for machines 5 and 8;
 P022 - (6) B-type tubing furnaces;
 P023 - (3) F-type tubing furnaces;
 P024 - (3) I-type tubing furnaces;
 P026 - (3) tubing wet cut saws;
 P027 - (5) vacuum bake ovens;
- d. P028 - tubing wet cut saws;
 P030 - crucible coating process (Ortona);
 P031 - tube trimmer #2;
 P034 - auto cutter #2;
 Z001 - (6) I-type tubing furnaces;
 Z013 - crucible wet-cut saw with beveler;
 Z014 - (1) crucible belt-sander;
 Z015 - Spencer system-deck housekeeping;
 Z016 - 120 hp natural gas engine;
 Z017 - (3) crucible wet-cut saws;
 Z018 - crucible band saw; and
 Z020 - vacuum system - LD housekeeping.

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

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b State Only Enforceable Section

1. Emission Limitations

Ammonia emissions from the SCR unit stack shall not exceed 60.4 pounds per hour and 264.6 tons per year.

The ammonia emission limitations were established and permitted under OAC rule 3745-31-05(C) in PTI 01-08818.

Ammonia is an air toxic, and the hourly emission limitation was established to reflect the status quo ammonia emission rate for this emissions unit for future air toxics evaluations that may involve this emissions unit.

2. Additional Terms and Conditions

None.

3. Operational Restrictions

None.

4. Monitoring and Record Keeping Requirements

a. Air Toxics Language

Ammonia emissions from the SCR unit stack were evaluated based on the actual materials and the design parameters of the SCR unit. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by the SCR unit using actual operating data and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ammonia
 TLV (mg/m3): 17
 Maximum Hourly Emission Rate (lbs/hr): 60.4
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 111.8
 MAGLC (ug/m3): 404.8

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. i. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of

new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

ii. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

iii. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions units that vent to the SCR unit will still satisfy the "Air Toxic Policy":

iv. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

a. v. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

vi. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

5. Reporting Requirements

None.

6. Testing Requirements

Compliance with the emission limitations of these terms and conditions shall be demonstrated in accordance with the following methods:

a. Emission Limitation:

Ammonia emissions from the SCR unit stack shall not exceed 60.4 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in Section B.6.c.

b. Emission Limitation:

Ammonia emissions from the SCR unit stack shall not exceed 264.6 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation for ammonia may be assumed provided compliance is maintained with the pound per hour emission limitation for ammonia. The annual limitation was calculated by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

c. The permittee shall conduct, or have conducted, emission testing for the SCR unit in accordance with the following requirements:

i. The emission testing shall be conducted approximately 2.5 years after the effective date of this permit and approximately 12 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the hourly emission limitation for ammonia.

iii. The following test methods shall be employed to demonstrate compliance with the ammonia emission limitation: 40 CFR Part 60, Appendix A, Methods 1 - 4 and Conditional Test Method 027. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, CDO.

iv. The tests shall be conducted while all emissions units venting to the SCR unit are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA, CDO.

c. Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Ohio EPA, CDO. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, CDO's refusal to accept the emission tests.

Personnel from the Ohio EPA, CDO shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission tests shall be signed by the person or

persons responsible for the tests and submitted to the Ohio EPA, CDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with approval from the Ohio EPA, CDO.

7. Miscellaneous Requirements

- a. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

P002 auto-cutter #1/hand-cut saws;
P003 tubing wash tanks;
T001 HF tank;
T002 HF tank;
Z002 (3) vacuum bake ovens;
Z007 roadways/parking areas;
Z008 end cut saw table - LD feedstock;
Z009 large diameter tube cleaning and inspection;
Z012 (4) Fletcher-Terry saws; and
Z019 finishing dip tank #2.

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B001 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Large Diameter Lathe No. 1 - 3.78 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C).

Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour.

Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year.

See A.I.2.a below.

- | | | |
|--|--|---|
| | OAC rule 3745-31-05(C)
(synthetic minor to avoid PSD) | Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions. |
| | OAC rule 3745-17-07(A) | Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. |
| | OAC rule 3745-17-11(B)(1) | PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II. |
| | OAC rule 3745-23-06(B) | See A.I.2.b below. |
2. **Additional Terms and Conditions**
- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
 - b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
 - c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. **Operational Restrictions**

1. None

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

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. **Reporting Requirements**

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (3.78) by an emission factor of 12.06 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B001 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
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2. Additional Terms and Conditions

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B002 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Lathe No. 2 - 3.78 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below. Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions. Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II. See A.I.2.b below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-23-06(B)	
2. Additional Terms and Conditions		
a.	The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.	
b.	The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.	
c.	The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.	

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. **Reporting Requirements**

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. **Emission Limitation:**

NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (3.78) by an emission factor of 12.06 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. **Emission Limitation:**

210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. **Emission Limitation:**

Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. **Emission Limitation:**

PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. **Emission Limitation:**

Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: B002 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
2. Additional Terms and Conditions			
1.	None		

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B003 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Large Diameter Lathe No. 3 - 3.78 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The

efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.

4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (3.78) by an emission factor of 12.06 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:

210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:

Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:

PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A,

Methods 1-5.

- e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B003 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
2. Additional Terms and Conditions		
1. None		

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II. **Operational Restrictions**

1. None

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

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B004 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Large Diameter Lathe No. 4 - 3.78 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below. Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-07(A)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-17-11(B)(1)	See A.I.2.b below.
	OAC rule 3745-23-06(B)	

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. **Operational Restrictions**

1. None

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

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. **Reporting Requirements**

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (3.78) by an emission factor of 12.06 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.

- c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
- Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
- d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.
- Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.
- If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
- e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.
- Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B004 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
2. Additional Terms and Conditions		
1. None		

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II. **Operational Restrictions**

1. None

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

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: B005 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Lathe No. 5 - 3.78 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	See A.1.2.a below. Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on

Table I which is more stringent than the allowable PE rate from Figure II.
See A.I.2.b below.

OAC rule 3745-23-06(B)

2. **Additional Terms and Conditions**

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. **Operational Restrictions**

1. None

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

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. **Reporting Requirements**

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (3.78) by an emission factor of 12.06 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

- b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.

- c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.

- d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B005 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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> |
|---|---|--------------------------------------|--|
| 2. Additional Terms and Conditions | | | |
| 1. None | | | |

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II. **Operational Restrictions**

1. None

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

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B006 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
Large Diameter Lathe No. 6 - 3.78 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone

from the SCR unit stack shall not exceed 2.4 tons per year.

See A.I.2.a below.

OAC rule 3745-31-05(C)
(synthetic minor to avoid PSD)

Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

OAC rule 3745-17-07(A)

Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

OAC rule 3745-17-11(B)(1)

PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.

OAC rule 3745-23-06(B)

See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. **Emission Limitation:**

NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (3.78) by an emission factor of 12.06 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. **Emission Limitation:**

210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. **Emission Limitation:**

Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. **Emission Limitation:**

PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. **Emission Limitation:**

Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B006 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
2. Additional Terms and Conditions			
1.	None		

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B023 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Lathe No. 10 - 5.04 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below. Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions. Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II. See A.I.2.b below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-23-06(B)	

2. **Additional Terms and Conditions**

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. **Operational Restrictions**

1. None

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

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet

CEMS; and

f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (5.04) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B023 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

1. None

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

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B024 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Large Diameter Lathe No. 11 - 5.04 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below. Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions. Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II. See A.I.2.b below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-23-06(B)	

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II -

Specific Facility Terms and Conditions, Section A.4.a.

2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (5.04) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:

Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

e. Emission Limitation:

Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B024 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

1. None

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

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B025 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
Large Diameter Lathe No. 12 - 5.04 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.b below.

2. **Additional Terms and Conditions**

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.

- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (5.04) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015,

P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.

c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.

d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B025 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B026 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Lathe No. 13 - 5.04 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	See A.I.2.a below. Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

OAC rule 3745-17-07(A)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
OAC rule 3745-23-06(B)	See A.I.2.b below.

2. **Additional Terms and Conditions**

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. **Operational Restrictions**

1. None

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

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. **Reporting Requirements**

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Applicable Compliance Method:

This emission limitation was established by multiplying the maximum hourly MMBtu demand (5.04) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

b. Emission Limitation:

210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.

c. Emission Limitation:

Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.

d. Emission Limitation:

PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:

Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

e. Emission Limitation:

Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0145000213 Emissions Unit ID: B026 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
2. Additional Terms and Conditions		
1. None		

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. None

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0145000213 Emissions Unit ID: B027 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Large Diameter Lathe No. 14 - 5.04 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C).

Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year.

See A.I.2.a below.

OAC rule 3745-31-05(C)
(synthetic minor to avoid PSD)

Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

OAC rule 3745-17-07(A)

Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

OAC rule 3745-17-11(B)(1)

PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.

OAC rule 3745-23-06(B)

See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
- 2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
- 3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
- 4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

- 1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
- 2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility

Terms and Conditions, Section A.5.d.

3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (5.04) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0145000213 Emissions Unit ID: B027 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
2. Additional Terms and Conditions		
1. None		

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B028 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Lathe No. 16 - 5.04 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
- 2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
- 3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
- 4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;

- b. the hours included in the 3-hour period;
- c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
- d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
- e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
- f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (5.04) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B028 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

1. None

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

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B029 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Large Diameter Lathe No. 17 - 5.04 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	See A.I.2.a below. Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (5.04) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:

210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:

Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.

- d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: B029 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

- 1. None

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

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B030 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Lathe No. 18 - 6.3 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 15.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.b below.

- 2. **Additional Terms and Conditions**

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

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

a. Emission Limitation:

NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 15.0 pounds per hour.

Applicable Compliance Method:

This emission limitation was established by multiplying the maximum hourly MMBtu demand (6.3) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be

demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

- b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.

- c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.

- d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B030 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
2.	Additional Terms and Conditions	

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: B031 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Lathe No. 15 - 5.04 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below.

- | | | |
|--|--|---|
| | OAC rule 3745-31-05(C)
(synthetic minor to avoid PSD) | Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions. |
| | OAC rule 3745-17-07(A) | Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. |
| | OAC rule 3745-17-11(B)(1) | PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II. |
| | OAC rule 3745-23-06(B) | See A.I.2.b below. |
2. **Additional Terms and Conditions**
- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
 - b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
 - c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. **Operational Restrictions**

1. None

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

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. **Reporting Requirements**

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (5.04) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: B031 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
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2. Additional Terms and Conditions

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P009 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
High Purity Crucible Machine No. 3 - uncontrolled.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions shall not exceed 3.3 pounds per hour from the stack serving this emissions unit.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Particulate emissions (PE) shall not exceed 3.25 tons per year from the stack serving this emissions unit. Total NOx emissions shall not exceed 18.1 tons per year, from the two high purity crucible machine stacks, for emissions units P009 and P025, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	See A.II.1 below. Visible PE from the stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE from the stack serving this emissions unit shall not exceed 0.74 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.a below.
2. Additional Terms and Conditions		
a.	The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.	
b.	The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop any additional monitoring, record keeping, and/or reporting to ensure compliance with these emission limitations.	

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II. Operational Restrictions

1. The maximum crucible production for emissions units P009 and P025, combined, shall not exceed 75,416 crucibles, based upon a rolling, 12-month summation of the crucible production figures.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. the total number of crucibles produced in emissions units P009 and P025;
 - b. the total NOx emission rate from emissions units P009 and P025, combined, in pounds, calculated using the following formula:
{number of crucibles produced monthly in P025}*{1.02 lbs/crucible} + {number of crucibles produced monthly in P009}*{0.48 lb/crucible}; and
 - c. the rolling, 12-month summation of NOx emissions, in tons, and the rolling, 12-month summation of crucibles produced for emissions units P009 and P025, combined.
2. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation. If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per

week, when this emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month crucible production restriction and the rolling, 12-month NOx emission limitation. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall submit annual reports that specify the total NOx emissions from emissions units P009 and P025, combined, for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for these emissions units in the annual Fee Emission Report.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions shall not exceed 3.3 pounds per hour from the stack serving this emissions unit.

Applicable Compliance Method:
Compliance with this emission limitation may be demonstrated by multiplying the maximum hourly number of crucibles produced in this emissions unit (6) by an emission factor of 0.48 lb/crucible (based on emission tests performed by GE Quartz, Inc. Newark Plant on 3/24/98).

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
Total NOx emissions shall not exceed 18.1 tons per year, from the two high purity crucible machine stacks, for emissions units P009 and P025, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation based on the record keeping required in section A.III.1.
 - c. Emission Limitation:
Visible PE from the stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation 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).
 - d. Emission Limitation:
PE shall not exceed 0.74 pound per hour from the stack serving this emissions unit.

Applicable Compliance Method:
Compliance with this emission limitation may be demonstrated based upon the results of emission tests performed on August 2, 1999 that demonstrated a maximum hourly emission rate of 0.017 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
PE shall not exceed 3.25 tons per year from the stack serving this emissions unit.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: P009 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

1. None

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

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: P010 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Arc fusion machine (P-14) No. 4 controlled with a dust collection system (4 baghouses and a ESP) and a SCR unit monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions for this emissions unit alone from the SCR unit stack shall not exceed 7.2 pounds per hour. Particulate emissions (PE) for this emissions unit alone from all stacks serving this emissions unit shall not exceed 7.0 tons per year. See A.I.2.a and A.I.2.b below. Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-07(A)	PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 1.6 pounds per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-23-06(B)	See A.I.2.c below.
	OAC rule 3745-17-07(B)	See A.I.2.f below.
	OAC rule 3745-17-08(B)	See A.I.2.e below.

2. Additional Terms and Conditions

- a. The emissions generated during the crucible formation shall be vented to the ESP. The emissions from the ESP shall be vented directly to the SCR unit.
- b. The permittee shall vent the emissions from this emissions unit through a dust collection system consisting of: baghouse no. 15, baghouse no. 3, baghouse no. 6 and baghouse no. 9, and a dry electrostatic precipitator (ESP) and shall operate the dust collection system (4 baghouses and ESP) at all times while operating this emissions unit.
- c. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- d. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.
- e. Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.
- f. Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B)

do not apply to this emissions unit.

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II. Operational Restrictions

1. The pressure drop across the baghouses which make up a portion of the dust collection system shall be maintained within the following pressure drop ranges while the emissions unit is in operation:
 - a. for baghouse no. 15, within the range of 1 to 6 inches of water;
 - b. for baghouse no. 3, within the range of 1 to 6 inches of water;
 - c. for baghouse no. 6, within the range of 1 to 6 inches of water; and
 - d. for baghouse no. 9, within the range of 1 to 6 inches of water.
2. The permittee shall operate the ESP during any operation of this emissions unit.
3. The secondary voltage (V) recorded at each field within the ESP shall be maintained within the manufacturer's recommended ranges:
 - a. a minimum of three fields out of a total of four must be operating; and
 - b. the secondary voltage of at least three operating fields shall not drop below 8 kV, for each field, for a period exceeding five minutes.

The ESP parameter ranges may be adjusted in the event that future emission testing is conducted which demonstrates compliance with the particulate emission limitation and written approval of the new ESP parameters is obtained from the Ohio EPA, Central District Office.
4. The operation of the control equipment outside the range specified above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA and/or U.S. EPA, compliance with the mass emission limitation and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA-approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the range specified above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain equipment to monitor the pressure drops across the dust collection system 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), with any modifications deemed necessary by the permittee. The permittee shall monitor the pressure drops across baghouse no. 15, baghouse no. 3, baghouse no. 6, and baghouse no. 9 on a daily basis.
2. The permittee shall monitor and record, once each day, the secondary voltage, in kilovolts, to each field and the number of fields operating in the ESP when the emissions unit is in operation.
3. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation. If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when this emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.
4. For monitoring and record keeping requirements for the hourly NO_x emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NO_x control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
5. For each 3-hour period when the NO_x control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NO_x control efficiency;

- b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time during which the pressure drop(s) across the baghouse(s) was (were) outside the operating range(s) specified above;
 - b. all periods of time during which the ESP was not operated in accordance with the restrictions specified in Section A.II.3; and
 - c. all exceedances of the hourly NOx emission limitation based upon the records required by Sections A.III.4 and A.III.5 above.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stacks and SCR unit stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 7.2 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by the following equation:

$$\text{Emission limitation (EL)} = (10 \text{ crucibles/hr}) \times (2.39 \text{ lbs of NOx/crucible}) \times (0.30)**$$

Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.5.e is less than or equal to the emission limitation determined in Section A.III.5.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

* The emission factor was established through emission tests performed by GE Quartz, Inc. on 12/4/96, 12/5/96, and 12/19/96.
** The control efficiency of the SCR unit is assumed to be 70% for the purpose of this calculation.
 - b. Emission Limitation:

210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required by the Ohio EPA and/or U.S. EPA, 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).

- d. Emission Limitation:
PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 1.6 pounds per hour.

Applicable Compliance Method:
Compliance with this emission limitation may be demonstrated using the following equation:

hourly PE rate = L + F + P + C where:

PE = particulate emissions for this emissions unit
L = loading of sand into crucible pots (lb/hr)
F = crucible formation through electric arc fusion (lb/hr)
P = crucible pop-off hood (lb/hr)
C = hot sand clean out (lb/hr)

$$L = (484 \text{ lbs/hr}) \times (0.174 \text{ lb/ton}) \times (0.01) \times (1 \text{ ton}/2000 \text{ lbs})$$

$$F = (10 \text{ crucibles/hr}) \times (0.37 \text{ lb PE/crucible}) \times (0.1) \times (0.9)$$

$$P = (484 \text{ lbs/hr}) \times (0.058 \text{ lb/ton}) \times (0.01) \times (1 \text{ ton}/2000 \text{ lbs})$$

$$C = (150 \text{ lbs/hr}) \times (0.75 \text{ lb PE / lb sand}) \times (0.001)$$

- d. * The transfer emission factor was derived with information from AP-42, 5th Edition, Volume I, Chapter 11, Mineral Products Industry, Table 11.12-2, dated January 1995.
** The emission factor was established through emission tests performed by GE Quartz, Inc Newark Plant from 12/17/96 through 12/19/96. Compliance with this emission limitation was demonstrated through emission tests performed on January 30, 2002.
*** The control efficiency of the ESP is assumed to be 90% for the purpose of this calculation.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be determined through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- e. Emission Limitation:
PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 7.0 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P010 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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</u>
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Measures

2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P011 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
Arc fusion machine (P-14) No. 5 controlled with a dust collection system (4 baghouses and a ESP) and a SCR unit monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions for this emissions unit alone from the SCR unit stack shall not exceed 7.2 pounds per hour. Particulate emissions (PE) for this emissions unit alone from all stacks serving this emissions unit shall not

exceed 7.0 tons per year.

See A.I.2.a and A.I.2.b below.

OAC rule 3745-31-05(C)
(synthetic minor to avoid PSD)

Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

OAC rule 3745-17-07(A)

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

OAC rule 3745-17-11(B)(1)

PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 1.6 pounds per hour based on Table I which is more stringent than the allowable PE rate from Figure II.

OAC rule 3745-23-06(B)

See A.I.2.c below.

OAC rule 3745-17-07(B)

See A.I.2.f below.

OAC rule 3745-17-08(B)

See A.I.2.e below.

2. Additional Terms and Conditions

- a. The emissions generated during the crucible formation shall be vented to the ESP. The emissions from the ESP shall be vented directly to the SCR unit.
- b. The permittee shall vent the emissions from this emissions unit through a dust collection system consisting of: baghouse no. 15, baghouse no. 4, baghouse no. 7 and baghouse no. 8, and a dry electrostatic precipitator (ESP) and shall operate the dust collection system (4 baghouses and ESP) at all times while operating this emissions unit.
- c. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- d. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.
- e. Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.
- f. Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

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ii. Operational Restrictions

1. The pressure drop across the baghouses which make up a portion of the dust collection system shall be maintained within the following pressure drop ranges while the emissions unit is in operation:
 - a. for baghouse no. 15, within the range of 1 to 6 inches of water;
 - b. for baghouse no. 4, within the range of 1 to 6 inches of water;
 - c. for baghouse no. 7, within the range of 1 to 6 inches of water; and
 - d. for baghouse no. 8, within the range of 1 to 6 inches of water.
2. The permittee shall operate the ESP during any operation of this emissions unit.
3. The secondary voltage (V) recorded at each field within the ESP shall be maintained within the manufacturer's recommended ranges:
 - a. a minimum of three fields out of a total of four must be operating; and
 - b. the secondary voltage of at least three operating fields shall not drop below 8 kV, for each field, for a period exceeding five minutes.

The ESP parameter ranges may be adjusted in the event that future emission testing is conducted which demonstrates compliance with the particulate emission limitation and written approval of the new ESP parameters is obtained from the Ohio EPA, Central District Office.
4. The operation of the control equipment outside the range specified above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA and/or U.S. EPA, compliance with the mass emission limitation and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA-approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the range specified above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain equipment to monitor the pressure drops across the dust collection system 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), with any modifications deemed necessary by the permittee. The permittee shall monitor the pressure drops across baghouse no. 15, baghouse no. 4, baghouse no. 7, and baghouse no. 8 on a daily basis.
2. The permittee shall monitor and record, once each day, the secondary voltage, in kilovolts, to each field and the number of fields operating in the ESP when the emissions unit is in operation.
3. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when this emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

4. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
5. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time during which the pressure drop(s) across the baghouse(s) was (were) outside the operating range(s) specified above;
 - b. all periods of time during which the ESP was not operated in accordance with the restrictions specific in Section A.II.3; and
 - c. all exceedances of the hourly NOx emission limitation based upon the records required by Sections A.III.4 and A.III.5 above.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stacks and SCR unit stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

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V. **Testing Requirements**

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

a. **Emission Limitation:**

NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 7.2 pounds per hour.

Applicable Compliance Method:

This emission limitation was established by the following equation:

$$\text{Emission limitation (EL)} = (10 \text{ crucibles/hr}) \times (2.39 \text{ lbs of NOx/crucible}) \times (0.30)**$$

Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.5.e is less than or equal to the emission limitation determined in Section A.III.5.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

* The emission factor was established through emission tests performed by GE Quartz, Inc. on 12/4/96, 12/5/96, and 12/19/96.

** The control efficiency of the SCR unit is assumed to be 70% for the purpose of this calculation.

b. **Emission Limitation:**

210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.

c. **Emission Limitation:**

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required by the Ohio EPA and/or U.S. EPA, 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).

d. **Emission Limitation:**

PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 1.6 pounds per hour.

Applicable Compliance Method:

Compliance with this emission limitation may be demonstrated using the following equation:

hourly PE rate = L + F + P + C where:

PE = particulate emissions for this emissions unit

L = loading of sand into crucible pots (lb/hr)

F = crucible formation through electric arc fusion (lb/hr)

P = crucible pop-off hood (lb/hr)

C = hot sand clean out (lb/hr)

$$L = (484 \text{ lbs/hr}) \times (0.174 \text{ lb/ton}) \times (0.01) \times (1 \text{ ton/2000 lbs})$$

$$F = (10 \text{ crucibles/hr}) \times (0.37 \text{ lb PE/crucible}) \times (0.1)***$$

$$P = (484 \text{ lbs/hr}) \times (0.058 \text{ lb/ton}) \times (0.01) \times (1 \text{ ton/2000 lbs})$$

$$C = (150 \text{ lbs/hr}) \times (0.75 \text{ lb PE / lb sand}) \times (0.001)$$

- d. * The transfer emission factor was derived with information from AP-42, 5th Edition, Volume I, Chapter 11, Mineral Products Industry, Table 11.12-2, dated January 1995.

** The emission factor was established through emission tests performed by GE Quartz, Inc Newark Plant from 12/17/96 through 12/19/96. Compliance with this emission limitation was demonstrated through emission tests performed on January 30, 2002.

*** The control efficiency of the ESP is assumed to be 90% for the purpose of this calculation.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be determined through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- e. Emission Limitation:
PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 7.0 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P011 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

- 1. None

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

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P012 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Arc fusion machine (P-272) No. 8 controlled with a dust collection system (4 baghouses and a ESP) and a SCR unit monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from all stacks serving this emissions unit shall not exceed 8.1 tons per year. See A.I.2.a and A.I.2.b below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 1.9 pounds per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.c below.
	OAC rule 3745-17-07(B)	See A.I.2.f below.
	OAC rule 3745-17-08(B)	See A.I.2.e below.

2. Additional Terms and Conditions

- a. The emissions generated during the crucible formation shall be vented to the ESP. The emissions from the ESP shall be vented directly to the SCR unit.
- b. The permittee shall vent the emissions from this emissions unit through a dust collection system consisting of: baghouse no. 15, baghouse no. 4, baghouse no. 7 and baghouse no. 8, and a dry electrostatic precipitator (ESP) and shall operate the dust collection system (4 baghouses and ESP) at all times while operating this emissions unit.
- c. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.

- d. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.
- e. Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.
- f. Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

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II. Operational Restrictions

- 1. The pressure drop across the baghouses which make up a portion of the dust collection system shall be maintained within the following pressure drop ranges while the emissions unit is in operation:
 - a. for baghouse no. 15, within the range of 1 to 6 inches of water;
 - b. for baghouse no. 4, within the range of 1 to 6 inches of water;
 - c. for baghouse no. 7, within the range of 1 to 6 inches of water; and
 - d. for baghouse no. 8, within the range of 1 to 6 inches of water.
- 2. The permittee shall operate the ESP during any operation of this emissions unit.
- 3. The secondary voltage (V) recorded at each field within the ESP shall be maintained within the manufacturer's recommended ranges:
 - a. a minimum of three fields out of a total of four must be operating; and
 - b. the secondary voltage of at least three operating fields shall not drop below 8 kV, for each field, for a period exceeding five minutes.

The ESP parameter ranges may be adjusted in the event that future emission testing is conducted which demonstrates compliance with the particulate emission limitation and written approval of the new ESP parameters is obtained from the Ohio EPA, Central District Office.
- 4. The operation of the control equipment outside the range specified above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA and/or U.S. EPA, compliance with the mass emission limitation and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA-approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the range specified above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations.

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III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall operate and maintain equipment to monitor the pressure drops across the dust collection system 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), with any modifications deemed necessary by the permittee. The permittee shall monitor the pressure drops across baghouse no. 15, baghouse no. 4, baghouse no. 7, and baghouse no. 8 on a daily basis.
- 2. The permittee shall monitor and record, once each day, the secondary voltage, in kilovolts, to each field and the number of fields operating in the ESP when the emissions unit is in operation.
- 3. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when this emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating

days of normal visible emissions.

4. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
5. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time during which the pressure drop(s) across the baghouse(s) was (were) outside the operating range(s) specified above;
 - b. all periods of time during which the ESP was not operated in accordance with the restrictions specified in Section A.II.3; and
 - c. all exceedances of the hourly NOx emission limitation based upon the records required by Sections A.III.4 and A.III.5 above.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stacks and SCR unit stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by the following equation:

$$\text{Emission limitation (EL)} = (6.32 \text{ crucibles/hr}) \times (7.04 \text{ lbs of NOx/crucible}) \times (0.30)**$$

Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.5.e is less than or equal to the emission limitation determined in Section A.III.5.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

* The emission factor was established through emission tests performed by GE Quartz, Inc. in November 2003.
** The control efficiency of the SCR unit is assumed to be 70% for the purpose of this calculation.
 - b. Emission Limitation:

210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.

- c. Emission Limitation:
Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required by the Ohio EPA and/or U.S. EPA, 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).

- d. Emission Limitation:
PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 1.9 pounds per hour.

Applicable Compliance Method:
Compliance with this emission limitation may be demonstrated using the following equation:

hourly PE rate = L + F + P + C where:

PE = particulate emissions for this emissions unit
L = loading of sand into crucible pots (lb/hr)
F = crucible formation through electric arc fusion (lb/hr)
P = crucible pop-off hood (lb/hr)
C = hot sand clean out (lb/hr)

$$L = (600 \text{ lbs/hr}) \times (0.174 \text{ lb/ton})^* \times (0.01) \times (1 \text{ ton}/2000 \text{ lbs})$$

$$F = (6.32 \text{ crucibles/hr}) \times (0.952 \text{ lb PE/crucible})^{**} \times (0.1)^{***}$$

$$P = (600 \text{ lbs/hr}) \times (0.058 \text{ lb/ton})^* \times (0.01) \times (1 \text{ ton}/2000 \text{ lbs})$$

$$C = (210 \text{ lbs/hr}) \times (0.75 \text{ lb PE/lb sand})^{**} \times (0.001)$$

- d. * The transfer emission factor was derived with information from AP-42, 5th Edition, Volume I, Chapter 11, Mineral Products Industry, Table 11.12-2, dated January 1995.

** The emission factor was established through emission tests performed by GE Quartz, Inc in November 2003.

*** The control efficiency of the ESP is assumed to be 90% for the purpose of this calculation.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be determined through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- e. Emission Limitation:
PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 8.1 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P012 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
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2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: P014 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Large Diameter Lathe No. 7 - 4.56 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C).

Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 17.0 pounds per hour.

Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year.

See A.I.2.a below.

OAC rule 3745-31-05(C)
(synthetic minor to avoid PSD)

Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

OAC rule 3745-17-07(A)

Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

OAC rule 3745-17-11(B)(1)

PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.

OAC rule 3745-23-06(B)

See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
- 2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
- 3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
- 4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

- 1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
- 2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility

Terms and Conditions, Section A.5.d.

3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 17.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (4.56) by an emission factor of 12.06 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0145000213 Emissions Unit ID: P014 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
2. Additional Terms and Conditions		
1. None		

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0145000213 Issuance type: Title V Proposed Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P015 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Lathe No. 8 - 4.56 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 17.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
- 2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
- 3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
- 4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;

- b. the hours included in the 3-hour period;
- c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
- d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
- e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
- f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 17.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (4.56) by an emission factor of 12.06 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: P015 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

1. None

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

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P017 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Quartz rod/tubing trimmer with mist eliminator for wet use and baghouse for dry use	OAC rule 3745-31-05(A)(3) (PTI 01-08511)	Particulate emissions shall not exceed 0.020 gr/dscf (equivalent to 1.23 pounds per hour at maximum flow rate) in the exhaust stream or there shall be no visible particulate emissions from the stack, whichever is less stringent. Total particulate emissions from this emissions unit shall not exceed 5.4 tons per year.
	OAC rule 3745-17-07(A)	See A.I.2 and A.II.1 below. The visible particulate emission limitations specified by this rule are less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitations established pursuant to OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- a. During dry operation, the permittee shall only operate the quartz rod/tubing trimmer unit while venting emissions to the dust collection system (the exhaust from the dust collection system is vented outside).
- b. During wet operation, the permittee shall only operate the quartz rod/tubing trimmer unit while venting to the mist eliminator (the exhaust of the mist eliminator is vented indoors).

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II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1-8 inches of water while the emissions unit is in operation.
2. The operation of the control equipment outside the range specified above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA and/or U.S. EPA, compliance with the mass emission limitation and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA-approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the range specified above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations.

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III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are

as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 01-08511, issued on March 5, 2002: A.III.2, and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

2. The permittee shall perform daily checks, using either certified or non-certified visible emissions readers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal conditions;
 - c. if the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required by the Ohio EPA Central District Office, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA methods and procedures. The results of any required mass emission tests and visible emission readings shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

If the daily checks show no visible emissions for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of no visible emissions.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse 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), with any modifications deemed necessary by the permittee. The permittee shall record the pressure drop across the baghouse on a daily basis when the emissions unit is operating.

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IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 01-08511, issued on March 5, 2002: A.IV.2 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse was outside the range specified above. The quarterly reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall also submit annual reports that specify the total particulate emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

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V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 01-08511, issued on March 5, 2002: A.V.2, A.V.2.a through A.V.2.c. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.
2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitation:

Particulate emissions shall not exceed 0.020 gr/dscf (equivalent to 1.23 pounds per hour at maximum flow rate) in the exhaust stream or there shall be no visible particulate emissions from the stack, whichever is less stringent.

Applicable Compliance Method:
If required by the Ohio EPA and/or U.S. EPA, compliance shall be demonstrated using Methods 1 through 5 of 40 CFR Part 60, Appendix A; otherwise, compliance shall be demonstrated by the absence

of any visible emissions from the baghouse serving this emissions unit and using Method 22 of 40 CFR Part 60, Appendix A.

- b. Emission Limitation:
PE shall not exceed 1.23 lbs/hr.

Applicable Compliance Method:
This emission limitation was calculated by multiplying the grain loading limit of the baghouse (0.020 gr/dscf) by the maximum air flow capacity of the baghouse (7,200 acfm), by 60 minutes per hour, and dividing by 7,000 grains per pound. Therefore, compliance shall be assumed provided compliance is maintained with the grain loading limit.

- c. Emission Limitation:
PE shall not exceed 5.4 tons/yr.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual limitation was calculated by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P017 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

- 1. None

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

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P020 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
Final cooling of quartz crucibles produced in crucible machines 4, 5, and 8 (six crucible coolers total) vented to baghouse.	OAC 3745-31-05(A)(3) (PTI 01-08824)	Particulate emissions (PE) from the exhaust stream shall not exceed 0.62 pound per hour and there shall be no visible particulate emissions.
	OAC rule 3745-17-07(B)	Particulate emissions shall not exceed 2.72 tons per year from the stack serving this emissions unit.
	OAC rule 3745-17-08(B)	See A.I.2.a below.
	OAC rule 3745-17-07(A)	See A.I.2.b below.
		The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to the requirement specified in OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to the requirement specified in OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**

- a. Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.
- b. Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.
- c. The permittee shall vent the PE to the baghouse at all times when the emissions unit is in operation.

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II. **Operational Restrictions**

- 1. The pressure drop across the baghouse shall be maintained within the range of 1 to 6 inches of water while the emissions unit is in operation.

2. The operation of the control equipment outside the range specified above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA and/or U.S. EPA, compliance with the mass emission limitation and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA-approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the range specified above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse 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), with any modifications deemed necessary by the permittee. The permittee shall record the pressure drop across the baghouse on a daily basis when this emissions unit is operating.
2. The permittee shall perform daily checks, using either certified or non-certified visible emissions readers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal conditions;
 - c. if the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA methods and procedures. The results of any required mass emission tests and visible emission readings shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse was outside the operating range specified above. The quarterly reports shall be submitted in accordance with Part I - General Term and Condition A.1.c.ii.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.1.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
Particulate emissions (PE) from the exhaust stream shall not exceed 0.62 pound per hour.

Applicable Compliance Method:
Crucible coolers for crucible machine 4
(8.70 lbs/hr) x (1-0.98) = 0.174 lb/hr

Crucible coolers for crucible machine 5
(8.70 lbs/hr) x (1-0.98) = 0.174 lb/hr

Crucible coolers for crucible machine 8
(13.32 lbs/hr) x (1-0.98) = 0.27 lb/hr

Total = 0.62 lb PE/hr

The emission factors of 8.70 lbs/hr and 13.32 lbs/hr were provided by GE Quartz. The emission factors were derived from experimental data and mass balance calculations. The experimental data is based

upon experiments which determined the amount of loose sand adhering to the product surface.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission tests performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A.

- b. Emission Limitation:
There shall be no visible particulate emissions.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated using Test Method 22-like visible emission observations. Although Test Method 22 applies to fugitive emissions units, the visible/no visible emissions observation technique of Test Method 22 can be applied to ducted emissions, i.e., Test Method 22-like visible emission observations.

- c. Emission Limitation:
Particulate emissions shall not exceed 2.72 tons per year from the stack servicing this emissions unit.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual limitation was calculated by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P020 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

- 1. None

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

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P021 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Repair Lathe No. 1 - 0.78 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 2.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.b below.

2. Additional Terms and Conditions

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR)

unit while operating this emissions unit.

- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 2.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.78) by an emission factor of 8.5 lbs/MMBtu (derived from emission tests performed on May 28, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A,

Methods 1-4 and 7E.

- b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
- c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
- d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
- e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P021 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
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2. **Additional Terms and Conditions**

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P025 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
High Purity Crucible Machine No. 1 - uncontrolled.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions shall not exceed 4.13 pounds per hour from the stack serving this emissions unit.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Particulate emissions (PE) shall not exceed 4.6 tons per year from the stack serving this emissions unit. Total NOx emissions shall not exceed 18.1 tons per year, from the two high purity crucible machine stacks, for emissions units P009 and P025, combined, as a rolling, 12-month summation of the NOx emissions.

- | | | |
|--|---------------------------|--|
| | OAC rule 3745-17-07(A) | See A.II.1 below.
Visible PE from the stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. |
| | OAC rule 3745-17-11(B)(1) | PE from the stack serving this emissions unit shall not exceed 1.042 pounds per hour based on Table I which is more stringent than the allowable PE rate from Figure II. |
| | OAC rule 3745-23-06(B) | See A.I.2.a below. |
2. **Additional Terms and Conditions**
- a. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
 - b. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop any additional monitoring, record keeping, and/or reporting to ensure compliance with these emission limitations.

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II. **Operational Restrictions**

1. The maximum crucible production for emissions units P009 and P025, combined, shall not exceed 75,416 crucibles, based upon a rolling, 12-month summation of the crucible production figures.

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

1. The permittee shall maintain monthly records of the following information:
 - a. the total number of crucibles produced in emissions units P009 and P025;
 - b. the total NOx emission rate from emissions units P009 and P025, combined, in pounds, calculated using the following formula:
{number of crucibles produced monthly in P025}*{1.02 lbs/crucible} + {number of crucibles produced monthly in P009}*{0.48 lb/crucible}; and
 - c. the rolling, 12-month summation of NOx emissions, in tons, and the rolling, 12-month summation of crucibles produced for emissions units P009 and P025, combined.
2. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when this emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month crucible production restriction and the rolling, 12-month NOx emission limitation. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-

month period.

3. The permittee shall submit annual reports that specify the total NOx emissions from emissions units P009 and P025, combined, for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for these emissions units in the annual Fee Emission Report.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

NOx emissions shall not exceed 4.13 pounds per hour from the stack serving this emissions unit.

Applicable Compliance Method:
Compliance with this emission limitation may be demonstrated by multiplying the maximum hourly number of crucibles produced in this emissions unit (6) by an emission factor of 0.48 lb/crucible (based on emission tests performed by GE Quartz, Inc. Newark Plant on 3/24/98).

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:

Total NOx emissions shall not exceed 18.1 tons per year, from the two high purity crucible machine stacks, for emissions units P009 and P025, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation based on the record keeping required in section A.III.1.
 - c. Emission Limitation:

Visible PE from the stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation 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).
 - d. Emission Limitation:

PE shall not exceed 1.042 pounds per hour from the stack serving this emissions unit.

Applicable Compliance Method:
Compliance with this emission limitation may be demonstrated based upon the results of emission tests performed on August 2, 1999 that demonstrated a maximum hourly emission rate of 0.057 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:

PE shall not exceed 4.6 tons per year from the stack serving this emissions unit.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: P025 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
2. Additional Terms and Conditions			
1.	None		

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. None

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0145000213 Issuance type: Title V Proposed Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P032 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Large Diameter Lathe No. 9 - 5.04 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below. Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions. Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II. See A.I.2.b below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-23-06(B)	

2. **Additional Terms and Conditions**

- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
- b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. **Operational Restrictions**

1. None

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

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet

CEMS; and

f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 12.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (5.04) by an emission factor of 7.77 lbs/MMBtu (derived from emission tests performed on March 25, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P032 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

- 1. None

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

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P033 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Final cooling of quartz crucibles produced in crucible machine 9 (two crucible coolers total) vented to baghouse.	OAC rule 3745-31-05(A)(3) (PTI 01-08823)	Particulate emissions (PE) from the exhaust stream shall not exceed 0.3 pound per hour and there shall be no visible particulate emissions.
		Particulate emissions shall not exceed 1.31 tons per year from the stack serving this emissions unit.
		See A.I.2.c below.
	OAC rule 3745-17-07(B)	See A.I.2.a below.
	OAC rule 3745-17-08(B)	See A.I.2.b below.
	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to the requirement specified in OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to the requirement specified in OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- a. Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.
- b. Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.
- c. The permittee shall vent the PE to the baghouse at all times when the emissions unit is in operation.

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II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 6 inches of water while the emissions unit is in operation.
2. The operation of the control equipment outside the range specified above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA and/or U.S. EPA, compliance with the mass emission limitation and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA-approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the range specified above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse 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), with any modifications deemed necessary by the permittee. The permittee shall record the pressure drop across the baghouse on a daily basis when this emissions unit is operating.

2. The permittee shall perform daily checks, using either certified or non-certified visible emissions readers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal conditions;
 - c. if the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA methods and procedures. The results of any required mass emission tests and visible emission readings shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation. If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse was outside the operating range specified above. The quarterly reports shall be submitted in accordance with Part I - General Term and Condition A.1.c.ii.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.1.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
Particulate emissions (PE) from the exhaust stream shall not exceed 0.3 pound per hour.

Applicable Compliance Method:
Crucible coolers for crucible machine 9
 $(13.86 \text{ lbs/hr}) \times (1-0.98) = 0.3 \text{ lb/hr}$

The emission factor of 13.86 lbs/hr was provided by GE Quartz. The emission factor was derived from experimental data and mass balance calculations. The experimental data is based upon experiments which determined the amount of loose sand adhering to the product surface.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission tests performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A.
 - b. Emission Limitation:
There shall be no visible particulate emissions.

Applicable Compliance Method:
Compliance shall be demonstrated using Test Method 22-like visible emission observations. Although Test Method 22 applies to fugitive emissions units, the visible/no visible emissions observation technique of Test Method 22 can be applied to ducted emissions, i.e., Test Method 22-like visible emission observations.
 - c. Emission Limitation:
Particulate emissions shall not exceed 1.31 tons per year from the stack serving this emissions unit.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual limitation was calculated by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P033 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

- 1. None

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

- 1. None

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P035 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Arc fusion machine (P-272) No. 9 controlled with a dust collection system (4 baghouses and a ESP) and a SCR unit monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from all stacks serving this emissions unit shall not exceed 8.1 tons per year. See A.I.2.a and A.I.2.b below.
	OAC rule 3745-31-05(C) (synthetic minor to avoid PSD)	Total NOx emissions from the SCR unit stack shall not exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.
	OAC rule 3745-17-07(A)	Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 1.9 pounds per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
	OAC rule 3745-23-06(B)	See A.I.2.c below.
	OAC rule 3745-17-07(B)	See A.I.2.f below.
	OAC rule 3745-17-08(B)	See A.I.2.e below.

2. Additional Terms and Conditions

- a. The emissions generated during the crucible formation shall be vented to the ESP. The emissions from the ESP shall be vented directly to the SCR unit.
- b. The permittee shall vent the emissions from this emissions unit through a dust collection system consisting of: baghouse no. 15, baghouse no. 3, baghouse no. 6 and baghouse no. 9, and a dry electrostatic precipitator (ESP) and shall operate the dust collection system (4 baghouses and ESP) at all times while operating this emissions unit.
- c. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- d. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.
- e. Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.
- f. Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

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II. Operational Restrictions

1. The pressure drop across the baghouses which make up a portion of the dust collection system shall be maintained within the following pressure drop ranges while the emissions unit is in operation:
 - a. for baghouse no. 15, within the range of 1 to 6 inches of water;
 - b. for baghouse no. 3, within the range of 1 to 6 inches of water;
 - c. for baghouse no. 6, within the range of 1 to 6 inches of water; and
 - d. for baghouse no. 9, within the range of 1 to 6 inches of water.
2. The permittee shall operate the ESP during any operation of this emissions unit.
3. The secondary voltage (V) recorded at each field within the ESP shall be maintained within the manufacturer's recommended ranges:
 - a. a minimum of three fields out of a total of four must be operating; and
 - b. the secondary voltage of at least three operating fields shall not drop below 8 kV, for each field, for a period exceeding five minutes.

The ESP parameter ranges may be adjusted in the event that future emission testing is conducted which demonstrates compliance with the particulate emission limitation and written approval of the new ESP parameters is obtained from the Ohio EPA, Central District Office.
4. The operation of the control equipment outside the range specified above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA and/or U.S. EPA, compliance with the mass emission limitation and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA-approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the range specified above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain equipment to monitor the pressure drops across the dust collection system 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), with any modifications deemed necessary by the permittee. The permittee shall monitor the pressure drops across baghouse no. 15, baghouse no. 3, baghouse no. 6, and baghouse no. 9 on a daily basis.
2. The permittee shall monitor and record, once each day, the secondary voltage, in kilovolts, to each field and the number of fields operating in the ESP when the emissions unit is in operation.
3. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when this emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.
4. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
5. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;

- d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
- e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
- f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time during which the pressure drop(s) across the baghouse(s) was (were) outside the operating range(s) specified above;
 - b. all periods of time during which the ESP was not operated in accordance with the restrictions specified in Section A.II.3; and
 - c. all exceedances of the hourly NOx emission limitation based upon the records required by Sections A.III.4 and A.III.5 above.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stacks and SCR unit stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 14.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by the following equation:

Emission limitation (EL) = (6.32 crucibles/hr)x(7.04 lbs of NOx/crucible)* x (0.30)**

Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.5.e is less than or equal to the emission limitation determined in Section A.III.5.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

* The emission factor was established through emission tests performed by GE Quartz, Inc. in November 2003.
** The control efficiency of the SCR unit is assumed to be 70% for the purpose of this calculation.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required by the Ohio EPA and/or U.S. EPA, 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).
 - d. Emission Limitation:

PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 1.9 pounds per hour.

Applicable Compliance Method:
Compliance with this emission limitation may be demonstrated using the following equation:

hourly PE rate = L + F + P + C where:

PE = particulate emissions for this emissions unit
L = loading of sand into crucible pots (lb/hr)
F = crucible formation through electric arc fusion (lb/hr)
P = crucible pop-off hood (lb/hr)
C = hot sand clean out (lb/hr)

$$L = (600 \text{ lbs/hr}) \times (0.174 \text{ lb/ton})^* \times (0.01) \times (1 \text{ ton}/2000 \text{ lbs})$$

$$F = (6.32 \text{ crucibles/hr}) \times (0.952 \text{ lb PE/crucible})^{**} \times (0.1)^{***}$$

$$P = (600 \text{ lbs/hr}) \times (0.058 \text{ lb/ton})^* \times (0.01) \times (1 \text{ ton}/2000 \text{ lbs})$$

$$C = (210 \text{ lbs/hr}) \times (0.75 \text{ lb PE/lb sand})^{**} \times (0.001)$$

- d. * The transfer emission factor was derived with information from AP-42, 5th Edition, Volume I, Chapter 11, Mineral Products Industry, Table 11.12-2, dated January 1995.
** The emission factor was established through emission tests performed by GE Quartz, Inc in November 2003.
*** The control efficiency of the ESP is assumed to be 90% for the purpose of this calculation.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be determined through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- e. Emission Limitation:
PE for this emissions unit alone from all stacks serving this emissions unit shall not exceed 8.1 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0145000213 Emissions Unit ID: P035 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **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>
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2. **Additional Terms and Conditions**

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P036 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. 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>
Large Diameter Repair Lathe No. 2 - 0.88 MMBtu/hr controlled with a SCR unit and monitored by a NOx CEMS.	OAC rule 3745-31-05(A)(3) (PTI 01-08818)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-23-06(B), and 3745-31-05(C). Nitrogen oxides (NOx) emissions from this emissions unit alone from the SCR unit stack shall not exceed 3.0 pounds per hour. Particulate emissions (PE) for this emissions unit alone from the SCR unit stack shall not exceed 2.4 tons per year. See A.I.2.a below. Total NOx emissions from the SCR unit stack shall not
	OAC rule 3745-31-05(C)	

- | | | |
|--|--------------------------------|---|
| | (synthetic minor to avoid PSD) | exceed 210.7 tons per year for emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions. |
| | OAC rule 3745-17-07(A) | Visible PE from the SCR unit stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. |
| | OAC rule 3745-17-11(B)(1) | PE for this emissions unit alone from the SCR unit stack shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II. |
| | OAC rule 3745-23-06(B) | See A.I.2.b below. |
2. **Additional Terms and Conditions**
- a. The permittee shall vent the emissions from this emissions unit to a selective catalytic reduction (SCR) unit while operating this emissions unit.
 - b. The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
 - c. The PE and NOx pounds per hour and PE tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit after control.

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II. **Operational Restrictions**

1. None

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

1. For monitoring and record keeping requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.4.a.
2. For monitoring and record keeping requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.4.f.
3. For monitoring and record keeping requirements for the hourly NOx emission limitation, the permittee shall collect and record the rolling, 3-hour average of the NOx control (destruction) efficiency of the SCR. The efficiency shall be based upon data obtained from the SCR inlet analyzer and the outlet CEMS.
4. For each 3-hour period when the NOx control efficiency is less than 70%, the permittee shall note the following in the operations log:
 - a. the 3-hour average NOx control efficiency;
 - b. the hours included in the 3-hour period;
 - c. for each hour within the period, the production lathes, repair lathes and arc fusion machines that were operating;
 - d. for each hour within the period, the sum of the hourly NOx emission limitations for the production lathes, repair lathes and arc fusion machines that were operating;
 - e. for each hour within the period, the NOx emissions in pounds per hour measured by the SCR outlet CEMS; and
 - f. for each hour within the period, whether the value for (e) exceeds the value for (d), above.

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IV. **Reporting Requirements**

1. For reporting requirements for the rolling, 12-month NOx emission limitation, see Part II - Specific Facility Terms and Conditions, Section A.5.a.
2. For reporting requirements for the visible PE limitation from the SCR unit stack, see Part II - Specific Facility Terms and Conditions, Section A.5.d.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly NOx emission limitation as required by Section A.III.4.f above. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
NOx emissions for this emissions unit alone from the SCR unit stack shall not exceed 3.0 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.88) by an emission factor of 8.5 lbs/MMBtu (derived from emission tests performed on May 28, 1998) and by (1-0.70) for the control efficiency of the SCR unit. Compliance with this limitation may be demonstrated by showing that the rolling, 3-hour average SCR control efficiency is equal to or greater than 70%.

If the rolling, 3-hour average SCR control efficiency is less than 70%, compliance with this emission limitation shall be demonstrated by showing that the NOx emission rate determined in Section A.III.4.e is less than or equal to the emission limitation determined in Section A.III.4.d.

If required by the Ohio EPA and/or U.S. EPA, compliance with this emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
 - b. Emission Limitation:
210.7 tons per year of NOx from the SCR unit stack serving emissions units B001, B002, B003, B004, B005, B006, B023, B024, B025, B026, B027, B028, B029, B030, B031, P010, P011, P012, P014, P015, P021, P032, P035, and P036, combined, as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.a.
 - c. Emission Limitation:
Visible PE from the SCR stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
The permittee shall demonstrate compliance with this emission limitation as described in Part II - Facility Specific Terms and Conditions, Section A.6.b.
 - d. Emission Limitation:
PE for this emissions unit alone from the SCR stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:
Compliance with this emission limitation was demonstrated based upon the results of emission tests performed on May 28, 1998 that demonstrated a maximum hourly emission rate of 0.4 lb/hr.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.
 - e. Emission Limitation:
Particulate emissions (PE) for this emissions unit alone from the SCR stack shall not exceed 2.4 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: P036 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
2. Additional Terms and Conditions		
1. None		

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. None

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0145000213 Emissions Unit ID: P037 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. 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>
Automated crucible cleaning system: chemical delivery system, acid etching system, spent acid waste tanks, and scrubber.	OAC rule 3745-31-05(A)(3) (PTI 01-08339)	Hydrogen fluoride emissions from the wet caustic scrubber stack shall not exceed 0.15 pound per hour. Hydrogen fluoride emissions shall not exceed 0.66 ton per year. See Sections A.I.2.a, A.I.2.b, A.II.1 and A.II.2 below.

2. **Additional Terms and Conditions**

- a. The permittee shall vent the emissions from this emissions unit to a wet caustic scrubber and operate the wet caustic scrubber while operating this emissions unit.
- b. The emission limitations of 0.15 pound hydrogen fluoride emissions per hour and 0.66 ton hydrogen fluoride emissions per year were established for PTI purposes to reflect the potential to emit for this emissions unit after being vented to a wet caustic scrubber. Therefore, the parametric monitoring of the wet caustic scrubber as established in the following terms and conditions will ensure compliance with these emission limitations.
- c. The emissions from the following components of the automated crucible cleaning system shall be vented to the wet caustic scrubber:
 - i. chemical delivery;
 - ii. acid etching (crucible cleaning); and
 - iii. spent acid waste tanks.

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II. **Operational Restrictions**

1. The permittee shall maintain the wet caustic scrubber liquid recirculation flow rate at not less than 100 gallons per minute (gpm) while operating this emissions unit.
2. The permittee shall continuously maintain the scrubber liquid pH at a value of not less than 7 at all times while the emissions unit is in operation.
3. The operation of the control equipment outside the range specified above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA and/or U.S. EPA, compliance with the mass emission limitation and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA-approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the range specified above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations.

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

1. The monitoring devices and recorder(s) shall be installed, calibrated, operated and maintained in accordance with good engineering practices. To meet this monitoring requirement the permittee has established an interlocked Process Control System PLC to continuously monitor and record the parameters listed in Section A.II above and to automatically shut down the emissions unit before an excursion from the operational restrictions listed in Section A.II above occurs.
2. While the emissions unit is in operation, the permittee shall record the following parameters on a daily basis:
 - a. the scrubber liquid recirculation flow rate, in gpm; and
 - b. the scrubber liquid pH.

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - a. the scrubber liquid recirculation flow rate, in gpm; and
 - b. the scrubber liquid pH.
2. The permittee shall submit the quarterly deviation (excursion) reports in accordance with the General Term and Condition A.1.c.ii of this permit.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
Hydrogen fluoride emissions from the wet caustic scrubber stack shall not exceed 0.15 pound per hour.

Applicable Compliance Method:
Compliance with the pound per hour for hydrogen fluoride may be demonstrated by multiplying the emission factor of 10.55 pounds per hour by the scrubber control efficiency of 98.6%.

If required by the Ohio EPA and/or U.S. EPA, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 26. Compliance with this emission limitation has been demonstrated based on the results of emission tests performed on September 15 and 16, 2003 that showed a maximum hourly emission rate of 0.0174 lb/hr.
 - b. Emission Limitation:
Hydrogen fluoride emissions shall not exceed 0.66 ton per year.

Applicable Compliance Method:
Compliance with the annual emission limitation for hydrogen fluoride may be assumed provided compliance is maintained with the pound per hour emission limitation for hydrogen fluoride. The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0145000213 Emissions Unit ID: P037 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **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>
Automated crucible cleaning system: chemical delivery system, acid etching system, spent acid waste tanks, and scrubber.		Ammonia emissions from the wet caustic scrubber stack shall not exceed 0.9 pound per hour and 3.94 tons per year.

See Section B.III below.

2. **Additional Terms and Conditions**

- a. Ammonia is an air toxic, and the hourly emission limitation was established to reflect the status quo ammonia emission rate for this emissions unit for future air toxics evaluations that may involve this emissions unit.

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II. **Operational Restrictions**

1. None

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III. Monitoring and/or Record Keeping Requirements

1. Air Toxics Language

The permit to install for this emissions unit P037 was evaluated based on the actual materials used and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: ammonia
 TLV (mg/m3): 17
 Maximum Hourly Emission Rate (lb/hr): 0.9
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 345.9
 MAGLC (ug/m3): 404.8

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. Compliance with the emission limitations in Section B.1.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:
 Ammonia emissions shall not exceed 0.9 pound per hour and 3.94 tons per year.

Applicable Compliance Methods:

If required by the Ohio EPA and/or U.S. EPA, compliance with the hourly emission limitation shall be demonstrated through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Conditional Test Method 027. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA and/or U.S. EPA.

Compliance with the annual emission limitation for ammonia may be assumed provided compliance is maintained with the pound per hour emission limitation for ammonia. The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None