

Synthetic Minor Determination and/or **Netting Determination**
Permit To Install 1304629

A. Source Description

Advanced Energy Technology Inc. Lakewood, Ohio facility manufactures carbon, graphite flake and rolled graphite products.

Advanced Energy Technology proposed to modify the four identical independent flexible graphite rolling lines, P023, P024, P025, and P026. The bottom graphite flake feed of the four rolling lines will be modified to feed flake from the top. The modification will more than double the feed capacity for each rolling line. The previous permit to install 13-02937 for P023, P024, P025, and P026 was issued on March 26, 2002.

B. Facility Emissions and Attainment Status

Cuyahoga County is designated as attainment for sulfur dioxide (SO₂), nitrogen oxides (NO_x), and carbon monoxide (CO). Cuyahoga County is designated as non-attainment for particulate emissions, PM₁₀ and ozone (Organic Compounds).

The Advanced Energy Technology is a Title V facility. The potential to emit SO₂, NO_x and CO emissions exceeds 100 tons per year.

C. Source Emissions

Based on 8,760 hours per year, these four (4) modified emissions units will have a maximum potential to emit of 119.1 tons of SO₂ per year, 197 tons of NO_x per year and 973 tons of CO per year.

Based upon the maximum potential to emit, these four (4) modified emissions units would be subject to Prevention of Significant Deterioration (PSD) permitting requirements. However, these four (4) emissions units will be limited to maximum SO₂ emissions of 72.0 tons per year, NO_x emissions of 78.0 tons per year and maximum CO emissions of 245.0 tons per year. These limits are based on a combination of production limitations and operating scenarios. The source has developed emissions factors for these operating scenarios and will limit annual production such that the total emissions from all operating scenarios will be less than the emission limits specified above.

The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that includes any exceedances of the rolling, 12-month emission limitation for all four rolling lines, P023, P024, P025, and P026.

The permittee shall also submit annual reports to the Cleveland DAQ that specify the total particulate, SO₂, CO, and NO_x emissions from the four emissions units for the previous calendar year. The reports shall be submitted by April 15 of each year.

D. Conclusion

With the federally enforceable permit terms and conditions limiting the total operation, this permit modification is a "Synthetic Minor" and, therefore, not subject to PSD permitting requirements.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL
CUYAHOGA COUNTY**

CERTIFIED MAIL

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov.
Center

Application No: 13-04629

Fac ID: 1318281215

DATE: 5/18/2006

Advanced Energy Technology Inc.
Elizabeth Good
11709 Madison Avenue
Lakewood, OH 441070000

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$2000** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

CLAA

PA

CUYAHOGA COUNTY

PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL
13-04629 FOR AN AIR CONTAMINANT SOURCE FOR **Advanced Energy Technology Inc.**

On 5/18/2006 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Advanced Energy Technology Inc.**, located at **11709 Madison Avenue, Lakewood, Ohio.**

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 13-04629:

Permit Modification to increase fleke feed rate in four rolling lines -- P023, P024, P025, and P026.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

David Hearne, Cleveland City Health Department, Division of the Environment, 1925 St. Clair Avenue, Cleveland, OH 44114 [(216)664-2324]



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL

13-04629

Application Number: 13-04629
Facility ID: 1318281215
Permit Fee: **To be entered upon final issuance**
Name of Facility: Advanced Energy Technology Inc.
Person to Contact: Elizabeth Good
Address: 11709 Madison Avenue
Lakewood, OH 441070000

Location of proposed air contaminant source(s) [emissions unit(s)]:

**11709 Madison Avenue
Lakewood, Ohio**

Description of proposed emissions unit(s):

Permit Modification to increase fleke feed rate in four rolling lines -- P023, P024, P025, and P026.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Advanced Energy Technology Inc.

Facility ID: 1318281215

PTI Application: 13-04629

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written

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reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

- iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit-To-Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. Air Pollution Nuisance

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The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

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13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

B. State Only Enforceable Permit-To-Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder.

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The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

7. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

8. Construction Compliance Certification

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If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install.

Advai
PTI A

Emissions Unit ID: P023

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The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit-To-Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
CO	245
NOx	78
SO2	72
PE	4.3

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Adva

PTI A

Emissions Unit ID: P023

Issued: To be entered upon final issuance

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

none

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

none

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
<p>P023 - Rolling line no. 3 for producing flexible graphite with two natural gas-fired furnaces (5.7 mmBtu/hr total) equipped with an in-line cyclone, Venturi quench and wet 2-stage scrubber control system</p> <p>Terms in this permit supercede those identified in PTI 13-02937 issued March 26, 2002.</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.</p> <p>Carbon monoxide emissions (CO) shall not exceed 55.53 pounds per hour and 243.22 tons per year.</p> <p>Nitrogen oxide emissions (NOx) shall not exceed 11.26 pounds per hour and 49.32 tons per year.</p> <p>Sulfur dioxide emissions (SO2) shall not exceed 6.8 pounds per hour and 29.8 tons per year.</p> <p>Particulate emissions (PE) shall not exceed 0.98 pound per hour and 4.3 tons per year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-21-08(B), and 3745-23-06(B)</p>

Adva
PTI A

Emissions Unit ID: P023

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

See section A.II.1 below.

CO emissions shall not exceed 245.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the CO emissions.

NOx emissions shall not exceed 78.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the NOx emissions.

SO2 emissions shall not exceed 72.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the SO2 emissions.

PE shall not exceed 4.3 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the PE emissions.

See sections A.I.2.d and A.II.9 below.

OAC rule 3745-17-07(A)
OAC rule 3745-17-11(B)
OAC rule 3745-18-06(E)
OAC rule 3745-21-08(B)
OAC rule 3745-23-06(B)

See section A.I.2.a below.

See section A.I.2.a below.

See section A.I.2.a below.

See section A.I.2.b below.

See section A.I.2.c below.

2. Additional Terms and Conditions

2.a The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

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- 2.b** The permit shall satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, the rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirements to satisfy the "best available control techniques and operating practices" still exists as part of the Federally-approved SIP of Ohio.

- 2.c** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.d** The tons per year emission limitations for PE, SO₂, CO, and NO_x are based on a synthetic minor determination.

II. Operational Restrictions

1. The permittee shall burn only natural gas in the furnaces associated with this emissions unit.
2. The scrubber control system shall be in operation whenever the associated rolling line is in operation (graphite flake is being fed).
3. The pressure drop across the scrubber control system shall be maintained at an hourly average of 0.8 inch of water column or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
4. The pH of the alkaline sodium hydroxide scrubbing in the first stage of the scrubber control system shall be maintained at an hourly average of 7.0 or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).

Emissions Unit ID: P023

5. The pH of the alkaline sodium hydroxide scrubbing solution in the second stage of the scrubber control system shall be maintained at an hourly average of 8.0 or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
6. The oxidation and reduction potential (ORP) of the second stage alkaline sodium hypochlorite scrubbing solution shall be maintained at an hourly average of positive (+) 700 millivolts or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
7. The scrubbing solution recirculation flow rate to the scrubber control system shall be maintained at an hourly average of 15 gallons per minute or greater (as verified by the record keeping in section A.III.2), whenever the associated rolling line is in operation and shall be monitored by the flow switch located at the discharge line of the recirculation pump. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
8. The particulate, SO₂, CO, and NO_x emissions (and the corresponding production rates calculated in section A.III.4) for the four rolling lines (P023, P024, P025, and P026), combined, shall not exceed the rolling, 12-month emission limitations specified in section A.I.1.
9. The annual graphite material feed rate shall not exceed twenty-nine and two tenths percent (29.2%) of the potential feed rate for the combined four rolling lines (P023, P024, P025, and P026), based upon a rolling, 12-month summation of the graphite material feed rate.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Month	Maximum Allowable Cumulative Percentage of: Graphite Material Potential Feed Rate for the Combined Four Rolling Lines (P023, P024, P025, and P026)
1	5.00%
1-	2 7.43%
1-	3 9.86%
1-	4 12.29%
1-	5 14.72%
1-	6 17.15%

Adva

PTI A

Emissions Unit ID: P023

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1-	7	19.58%
1-	8	22.10%
1-	9	24.44%
1-	10	26.87%
1-	11	29.20%
1-	12	29.20%

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III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall properly operate and maintain equipment to monitor and record the pH, pressure drop across the scrubber, ORP, and recirculation flow rate for each of the scrubber control systems when this emissions unit is in operation. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturers' recommendations, instructions and operating manual(s) with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The recirculation flow switch shall be checked semiannually for functional and operational reliability. At the semiannual check, the scrubbing solution recirculation flow switch position (i.e., the switch is either "made" or "not made") shall be verified and documented. "Made" means the scrubbing solution is flowing at the rate equal to or greater than 15 gallons per minute. "Not made" indicates that there is no pressure or a flow rate less than 15 gallons per minute. The permittee shall maintain records of the semiannual checks for actuation of the flow switch.
3. The permittee shall collect and record the following information, in averaged 1-hour blocks, when this emissions unit is in operation (graphite flake is being fed):
 - a. the pH levels of the alkaline sodium hydroxide scrubbing in the first stage of each operating scrubber control system;
 - b. the pH levels of the alkaline sodium hydroxide scrubbing solution in the second stage of each operating scrubber control system;
 - c. the ORP levels of the alkaline sodium hypochlorite scrubbing solution in the second stage of each operating scrubber control system;
 - d. the pressure drop across each operating scrubber control system; and
 - e. the scrubbing solution recirculation flow rate of each operating scrubber control system.
4. The permittee shall collect and record the following information for each month for this emissions units:

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- a. the quantity and type of graphite flake fed to this emissions unit, in tons;
- b. the total particulate, SO₂, CO, and NO_x emissions, in pounds and tons (calculated using the data from section A.III.4.a above and the formulas and production scenario related emissions factors specified below);
- c. the total operating shifts and calculated hours of operations for this emissions unit (8 hours equals one shift);
- d. the average hourly particulate, SO₂, CO, and NO_x emissions rate for this emissions unit, in pounds (from sections A.III.4.a through A.III.4.c above or from the average hourly emissions rates for the appropriate operating scenario from the most recent emissions tests that demonstrated that the emissions unit was in compliance);
- e. the total particulate, SO₂, CO, and NO_x emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the summation of the data from section A.III.4.b above for each emissions unit); and
- f. the rolling, 12-month summation of the particulate, SO₂, CO, and NO_x emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the total particulate, SO₂, CO, and NO_x emissions from all four rolling lines for the current month plus the total particulate, SO₂, CO, and NO_x emissions from all four rolling lines for the previous 11 months).

The total monthly particulate, SO₂, CO, and NO_x emissions for each production scenario shall be calculated in accordance with the following formulas for the rolling line:

Particulate Emissions (PE)

Total tons of PE per month = the summation of (tons of graphite flake fed) X (the appropriate PE emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

SO₂ Emissions

Total tons of SO₂ per month = the summation of (tons of graphite flake fed) X (the appropriate SO₂ emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

Total tons of CO per month = the summation of (tons of graphite flake fed) X (the appropriate CO emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

NO_x Emissions

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Total tons of NO_x per month = the summation of (tons of graphite flake fed) X (the appropriate NO_x emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

Production scenario #1 is defined as a graphite flake input of 50 mesh flake.

Production scenario #2 is defined as a graphite flake input of 80 mesh flake.

Production scenario #3 is defined as a graphite flake input of 20% regrind and/or trial flakes other than 50 or 80 mesh.

Any new production scenario shall require the notification of or the review and prior approval of the Cleveland Division of Air Quality (Cleveland DAQ).

Processing Scenario	Emission Factor (EF)
#1, #2, and #3	0.036 pound of PE per ton of graphite flake
#1, #2, and #3	0.045 pound of SO ₂ per ton of graphite flake
#1, #2, and #3	5.225 pounds of NO _x per ton of graphite flake
#1, #2, and #3	25.77 pounds of CO per ton of graphite flake

These emission factors may be updated based on results of emission testing which demonstrates compliance with the emission limitations in section A.I.1.

5. The permittee shall collect and record the following information each month for all four rolling lines (P023, P024, P025, and P026):
 - a. the graphite flake material usage for each month, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines; and
 - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the graphite material usage figures and the corresponding percentage of the potential feed rate for the combined four rolling lines.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the emissions unit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.
2. The permittee shall notify the Cleveland DAQ in writing of any record showing that the scrubber was not in service while the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30

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days after the event occurs.

3. The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:
 - a. all scrubber control system pressure drop 1-hour block averages* less than 0.8 inch of water column;
 - b. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 7.0 in the first stage of the scrubber control system;
 - c. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 8.0 in the second stage of the scrubber control system;
 - d. all ORP 1-hour block averages* of the alkaline sodium hypochlorite scrubbing solution less than positive (+) 700 millivolts in the second stage of the scrubber control system;
 - e. any 1-hour block average* indicating that the scrubbing solution recirculation flow switch was "not made" when the emissions unit was in operation;
 - f. any exceedances of the average hourly emission limitations for the rolling line; and
 - g. any exceedances of the rolling, 12-month emission limitation for all four rolling lines (P023, P024, P025, and P026), combined.

Note: *Any 1-hour block average containing 5-minutes or less of operation time (when graphite flake is being fed) for the entire hour will not be reported as a deviation (excursion).

The quarterly reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

4. The permittee shall also submit annual reports to the Cleveland DAQ that specify the total particulate, SO₂, CO, and NO_x emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year or by the deadline designated by the annual air fee emissions requirement if the deadline differs from April 15. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual air fee emission report.
5. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation on the graphite material feed rate, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum

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allowable cumulative graphite material feed rate, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

V. Testing Requirements

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

- a. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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Applicable Compliance Method:

If required by the Ohio EPA or Cleveland DAQ, compliance shall be determined through visible emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Test Method 9.

b. Emission Limitation:

PE shall not exceed 0.98 pound per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

c. Emission Limitation:

SO₂ emissions shall not exceed 6.8 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

d. Emission Limitation:

NO_x emissions shall not exceed 11.26 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

e. Emission Limitation:

CO emissions shall not exceed 55.53 pounds per hour.

Applicable Compliance Method:

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Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

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f. Emission Limitation:

Particulate emissions shall not exceed 4.3 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (0.98 pound per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

g. Emission Limitation:

SO₂ emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (6.8 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

h. Emission Limitation:

NO_x emissions shall not exceed 49.32 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (11.26 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

i. Emission Limitation:

CO emissions shall not exceed 243.22 tons per year.

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Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (55.53 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

j. Emission Limitation:

Particulate emissions shall not exceed 4.3 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

k. Emission Limitation:

SO₂ emissions shall not exceed 72.0 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

l. Emission Limitation:

NO_x emissions shall not exceed 78.0 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

m. Emission Limitation:

CO emissions shall not exceed 245.0 tons per year as a rolling, 12-month

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summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 90 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 270 days after initial startup of the emissions unit.
 - b. The emission testing shall be conducted for the scrubber control system serving emissions units P023, P024, P025, and P026 to demonstrate compliance with the PE, SO₂, NO_x, and CO emission limitations for emissions units P023, P024, P025, and P026. (Emissions units P023, P024, P025, and P026 are identical emissions units; therefore, the permittee may test only one of these emissions units and the results will be representative of the emissions for each of the identical emissions units).
 - c. The following test methods shall be employed to demonstrate compliance with the emission limitations:

Method 1 through 5 of 40 CFR Part 60, Appendix A for PE;
Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A for SO₂;
Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x; and
Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Cleveland DAQ.
 - d. Test(s) shall be conducted while emissions unit P023, P024, P025, or P026 is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.
 - e. The tons of graphite flake fed and the production scenario(s) operated under during the emission testing shall also be recorded.
 - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the

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Cleveland DAQ's refusal to accept the results of the emission test(s).

- g. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), 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.
- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

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VI. Miscellaneous Requirements

none

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(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 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

none

II. Operational Restrictions

none

III. Monitoring and/or Recordkeeping Requirements

none

IV. Reporting Requirements

none

V. Testing Requirements

none

VI. Miscellaneous Requirements

none

Advanced Energy Technology Inc.
PTI Application: 13-04629
Issue

Facility ID: 1318281215

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P024 - Rolling line no. 4 for producing flexible graphite with two natural gas-fired furnaces (5.7 mmBtu/hr total) equipped with an in-line cyclone, Venturi quench and wet 2-stage scrubber control system	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(C) Synthetic minor to avoid PSD

Terms in this permit supercede those identified in PTI 13-02937 issued March 26, 2002.

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OAC rule 3745-17-07(A)
OAC rule 3745-17-11(B)
OAC rule 3745-18-06(E)
OAC rule 3745-21-08(B)
OAC rule 3745-23-06(B)

Applicable Emissions
Limitations/control
measures

Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.

Carbon monoxide emissions (CO) shall not exceed 55.53 pounds per hour and 243.22 tons per year.

Nitrogen oxide emissions (NOx) shall not exceed 11.26 pounds per hour and 49.32 tons per year.

Sulfur dioxide emissions (SO2) shall not exceed 6.8 pounds per hour and 29.8 tons per year.

Particulate emissions (PE) shall not exceed 0.98 pound per hour and 4.3 tons per year.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-21-08(B), and 3745-23-06(B)
See section A.II.1 below.

CO emissions shall not exceed 245.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the CO emissions.

NOx emissions shall not exceed 78.0 tons per year (combined for P023, P024, P025, and P026) as a

rolling, 12-month summation of the NOx emissions.

SO2 emissions shall not exceed 72.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the SO2 emissions.

PE shall not exceed 4.3 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the PE emissions.

See sections A.I.2.d and A.II.9 below.

See section A.I.2.a below.
See section A.I.2.a below.
See section A.I.2.a below.
See section A.I.2.b below.
See section A.I.2.c below.

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2.b The permit shall satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, the rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirements to satisfy the "best available control techniques and operating practices" still exists as part of the Federally-approved SIP of Ohio.

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

2.d The tons per year emission limitations for PE, SO₂, CO, and NO_x are based on a synthetic minor determination.

II. Operational Restrictions

1. The permittee shall burn only natural gas in the furnaces associated with this emissions unit.
2. The scrubber control system shall be in operation whenever the associated rolling line is in operation (graphite flake is being fed).
3. The pressure drop across the scrubber control system shall be maintained at an hourly average of 0.8 inch of water column or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
4. The pH of the alkaline sodium hydroxide scrubbing in the first stage of the scrubber

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control system shall be maintained at an hourly average of 7.0 or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).

5. The pH of the alkaline sodium hydroxide scrubbing solution in the second stage of the scrubber control system shall be maintained at an hourly average of 8.0 or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
6. The oxidation and reduction potential (ORP) of the second stage alkaline sodium hypochlorite scrubbing solution shall be maintained at an hourly average of positive (+) 700 millivolts or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
7. The scrubbing solution recirculation flow rate to the scrubber control system shall be maintained at an hourly average of 15 gallons per minute or greater (as verified by the record keeping in section A.III.2), whenever the associated rolling line is in operation and shall be monitored by the flow switch located at the discharge line of the recirculation pump. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
8. The particulate, SO₂, CO, and NO_x emissions (and the corresponding production rates calculated in section A.III.4) for the four rolling lines (P023, P024, P025, and P026), combined, shall not exceed the rolling, 12-month emission limitations specified in section A.I.1.
9. The annual graphite material feed rate shall not exceed twenty-nine and two tenths percent (29.2%) of the potential feed rate for the combined four rolling lines (P023, P024, P025, and P026), based upon a rolling, 12-month summation of the graphite material feed rate.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Month	Maximum Allowable Cumulative Percentage of: Graphite Material Potential Feed Rate for the Combined Four Rolling Lines (P023, P024, P025, and P026)
1	5.00%
1-2	7.43%

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1-	3	9.86%
1-	4	12.29%
1-	5	14.72%
1-	6	17.15%
1-	7	19.58%
1-	8	22.10%
1-	9	24.44%
1-	10	26.87%
1-	11	29.20%
1-	12	29.20%

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III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall properly operate and maintain equipment to monitor and record the pH, pressure drop across the scrubber, ORP, and recirculation flow rate for each of the scrubber control systems when this emissions unit is in operation. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturers' recommendations, instructions and operating manual(s) with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The recirculation flow switch shall be checked semiannually for functional and operational reliability. At the semiannual check, the scrubbing solution recirculation flow switch position (i.e., the switch is either "made" or "not made") shall be verified and documented. "Made" means the scrubbing solution is flowing at the rate equal to or greater than 15 gallons per minute. "Not made" indicates that there is no pressure or a flow rate less than 15 gallons per minute. The permittee shall maintain records of the semiannual checks for actuation of the flow switch.
3. The permittee shall collect and record the following information, in averaged 1-hour blocks, when this emissions unit is in operation (graphite flake is being fed):
 - a. the pH levels of the alkaline sodium hydroxide scrubbing in the first stage of each operating scrubber control system;
 - b. the pH levels of the alkaline sodium hydroxide scrubbing solution in the second stage of each operating scrubber control system;
 - c. the ORP levels of the alkaline sodium hypochlorite scrubbing solution in the second stage of each operating scrubber control system;
 - d. the pressure drop across each operating scrubber control system; and
 - e. the scrubbing solution recirculation flow rate of each operating scrubber control system.
4. The permittee shall collect and record the following information for each month for this emissions units:

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- a. the quantity and type of graphite flake fed to this emissions unit, in tons;
- b. the total particulate, SO₂, CO, and NO_x emissions, in pounds and tons (calculated using the data from section A.III.4.a above and the formulas and production scenario related emissions factors specified below);
- c. the total operating shifts and calculated hours of operations for this emissions unit (8 hours equals one shift);
- d. the average hourly particulate, SO₂, CO, and NO_x emissions rate for this emissions unit, in pounds (from sections A.III.4.a through A.III.4.c above or from the average hourly emissions rates for the appropriate operating scenario from the most recent emissions tests that demonstrated that the emissions unit was in compliance);
- e. the total particulate, SO₂, CO, and NO_x emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the summation of the data from section A.III.4.b above for each emissions unit); and
- f. the rolling, 12-month summation of the particulate, SO₂, CO, and NO_x emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the total particulate, SO₂, CO, and NO_x emissions from all four rolling lines for the current month plus the total particulate, SO₂, CO, and NO_x emissions from all four rolling lines for the previous 11 months).

The total monthly particulate, SO₂, CO, and NO_x emissions for each production scenario shall be calculated in accordance with the following formulas for the rolling line:

Particulate Emissions (PE)

Total tons of PE per month = the summation of (tons of graphite flake fed) X (the appropriate PE emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

SO₂ Emissions

Total tons of SO₂ per month = the summation of (tons of graphite flake fed) X (the appropriate SO₂ emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

Total tons of CO per month = the summation of (tons of graphite flake fed) X (the appropriate CO emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

NO_x Emissions

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Total tons of NO_x per month = the summation of (tons of graphite flake fed) X (the appropriate NO_x emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

Production scenario #1 is defined as a graphite flake input of 50 mesh flake.

Production scenario #2 is defined as a graphite flake input of 80 mesh flake.

Production scenario #3 is defined as a graphite flake input of 20% regrind and/or trial flakes other than 50 or 80 mesh.

Any new production scenario shall require the notification of or the review and prior approval of the Cleveland Division of Air Quality (Cleveland DAQ).

Processing Scenario	Emission Factor (EF)
#1, #2, and #3	0.036 pound of PE per ton of graphite flake
#1, #2, and #3	0.045 pound of SO ₂ per ton of graphite flake
#1, #2, and #3	5.225 pounds of NO _x per ton of graphite flake
#1, #2, and #3	25.77 pounds of CO per ton of graphite flake

These emission factors may be updated based on results of emission testing which demonstrates compliance with the emission limitations in section A.I.1.

5. The permittee shall collect and record the following information each month for all four rolling lines (P023, P024, P025, and P026):
 - a. the graphite flake material usage for each month, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines; and
 - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the graphite material usage figures and the corresponding percentage of the potential feed rate for the combined four rolling lines.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the emissions unit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.
2. The permittee shall notify the Cleveland DAQ in writing of any record showing that the scrubber was not in service while the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30

days after the event occurs.

3. The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:
 - a. all scrubber control system pressure drop 1-hour block averages* less than 0.8 inch of water column;
 - b. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 7.0 in the first stage of the scrubber control system;
 - c. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 8.0 in the second stage of the scrubber control system;
 - d. all ORP 1-hour block averages* of the alkaline sodium hypochlorite scrubbing solution less than positive (+) 700 millivolts in the second stage of the scrubber control system;
 - e. any 1-hour block average* indicating that the scrubbing solution recirculation flow switch was "not made" when the emissions unit was in operation;
 - f. any exceedances of the average hourly emission limitations for the rolling line; and
 - g. any exceedances of the rolling, 12-month emission limitation for all four rolling lines (P023, P024, P025, and P026), combined.

Note: *Any 1-hour block average containing 5-minutes or less of operation time (when graphite flake is being fed) for the entire hour will not be reported as a deviation (excursion).

The quarterly reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

4. The permittee shall also submit annual reports to the Cleveland DAQ that specify the total particulate, SO₂, CO, and NO_x emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year or by the deadline designated by the annual air fee emissions requirement if the deadline differs from April 15. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual air fee emission report.
5. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation on the graphite material feed rate, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum

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allowable cumulative graphite material feed rate, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

V. Testing Requirements

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

- a. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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Applicable Compliance Method:

If required the by Ohio EPA or Cleveland DAQ, compliance shall be determined through visible emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Test Method 9.

b. Emission Limitation:

PE shall not exceed 0.98 pound per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

c. Emission Limitation:

SO₂ emissions shall not exceed 6.8 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

d. Emission Limitation:

NO_x emissions shall not exceed 11.26 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

e. Emission Limitation:

CO emissions shall not exceed 55.53 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon

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the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

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f. Emission Limitation:

Particulate emissions shall not exceed 4.3 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (0.98 pound per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

g. Emission Limitation:

SO₂ emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (6.8 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

h. Emission Limitation:

NO_x emissions shall not exceed 49.32 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (11.26 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

i. Emission Limitation:

CO emissions shall not exceed 243.22 tons per year.

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Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (55.53 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

j. Emission Limitation:

Particulate emissions shall not exceed 4.3 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

k. Emission Limitation:

SO₂ emissions shall not exceed 72.0 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

l. Emission Limitation:

NO_x emissions shall not exceed 78.0 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

m. Emission Limitation:

CO emissions shall not exceed 245.0 tons per year as a rolling, 12-month

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summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 90 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 270 days after initial startup of the emissions unit.
 - b. The emission testing shall be conducted for the scrubber control system serving emissions units P023, P024, P025, and P026 to demonstrate compliance with the PE, SO₂, NO_x, and CO emission limitations for emissions units P023, P024, P025, and P026. (Emissions units P023, P024, P025, and P026 are identical emissions units; therefore, the permittee may test only one of these emissions units and the results will be representative of the emissions for each of the identical emissions units).
 - c. The following test methods shall be employed to demonstrate compliance with the emission limitations:

Method 1 through 5 of 40 CFR Part 60, Appendix A for PE;
Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A for SO₂;
Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x; and
Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Cleveland DAQ.
 - d. Test(s) shall be conducted while emissions unit P023, P024, P025, or P026 is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.
 - e. The tons of graphite flake fed and the production scenario(s) operated under during the emission testing shall also be recorded.
 - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the

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Cleveland DAQ's refusal to accept the results of the emission test(s).

- g. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), 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.
- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

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VI. Miscellaneous Requirements

none

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B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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

none

II. Operational Restrictions

none

III. Monitoring and/or Recordkeeping Requirements

none

IV. Reporting Requirements

none

V. Testing Requirements

none

VI. Miscellaneous Requirements

none

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
<p>P025 - Rolling line no. 5 for producing flexible graphite with two natural gas-fired furnaces (5.7 mmBtu/hr total) equipped with an in-line cyclone, Venturi quench and wet 2-stage scrubber control system</p> <p>Terms in this permit supercede those identified in PTI 13-02937 issued March 26, 2002.</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>OAC rule 3745-31-05(C) Synthetic minor to avoid PSD</p>
		<p>OAC rule 3745-17-07(A) OAC rule 3745-17-11(B) OAC rule 3745-18-06(E) OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)</p>

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Applicable Emissions
Limitations/control
measures

Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.

Carbon monoxide emissions (CO) shall not exceed 55.53 pounds per hour and 243.22 tons per year.

Nitrogen oxide emissions (NOx) shall not exceed 11.26 pounds per hour and 49.32 tons per year.

Sulfur dioxide emissions (SO2) shall not exceed 6.8 pounds per hour and 29.8 tons per year.

Particulate emissions (PE) shall not exceed 0.98 pound per hour and 4.3 tons per year.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-21-08(B), and 3745-23-06(B)
 See section A.II.1 below.

CO emissions shall not exceed 245.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the CO emissions.

NOx emissions shall not exceed 78.0 tons per year (combined for P023, P024, P025, and P026) as a

rolling, 12-month summation of the NOx emissions.

SO2 emissions shall not exceed 72.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the SO2 emissions.

PE shall not exceed 4.3 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the PE emissions.

See sections A.I.2.d and A.II.9 below.

See section A.I.2.a below.

See section A.I.2.a below.

See section A.I.2.a below.

See section A.I.2.b below.

See section A.I.2.c below.

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b** The permit shall satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, the rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirements to satisfy the "best available control techniques and operating practices" still exists as part of the Federally-approved SIP of Ohio.

- 2.c** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.d** The tons per year emission limitations for PE, SO₂, CO, and NO_x are based on a synthetic minor determination.

II. Operational Restrictions

1. The permittee shall burn only natural gas in the furnaces associated with this emissions unit.
2. The scrubber control system shall be in operation whenever the associated rolling line is in operation (graphite flake is being fed).
3. The pressure drop across the scrubber control system shall be maintained at an hourly average of 0.8 inch of water column or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
4. The pH of the alkaline sodium hydroxide scrubbing in the first stage of the scrubber

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control system shall be maintained at an hourly average of 7.0 or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).

5. The pH of the alkaline sodium hydroxide scrubbing solution in the second stage of the scrubber control system shall be maintained at an hourly average of 8.0 or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
6. The oxidation and reduction potential (ORP) of the second stage alkaline sodium hypochlorite scrubbing solution shall be maintained at an hourly average of positive (+) 700 millivolts or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
7. The scrubbing solution recirculation flow rate to the scrubber control system shall be maintained at an hourly average of 15 gallons per minute or greater (as verified by the record keeping in section A.III.2), whenever the associated rolling line is in operation and shall be monitored by the flow switch located at the discharge line of the recirculation pump. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
8. The particulate, SO₂, CO, and NO_x emissions (and the corresponding production rates calculated in section A.III.4) for the four rolling lines (P023, P024, P025, and P026), combined, shall not exceed the rolling, 12-month emission limitations specified in section A.I.1.
9. The annual graphite material feed rate shall not exceed twenty-nine and two tenths percent (29.2%) of the potential feed rate for the combined four rolling lines (P023, P024, P025, and P026), based upon a rolling, 12-month summation of the graphite material feed rate.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Month	Maximum Allowable Cumulative Percentage of: Graphite Material Potential Feed Rate for the Combined Four Rolling Lines (P023, P024, P025, and P026)
1	5.00%
1-2	7.43%

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1-	3	9.86%
1-	4	12.29%
1-	5	14.72%
1-	6	17.15%
1-	7	19.58%
1-	8	22.10%
1-	9	24.44%
1-	10	26.87%
1-	11	29.20%
1-	12	29.20%

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III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall properly operate and maintain equipment to monitor and record the pH, pressure drop across the scrubber, ORP, and recirculation flow rate for each of the scrubber control systems when this emissions unit is in operation. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturers' recommendations, instructions and operating manual(s) with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The recirculation flow switch shall be checked semiannually for functional and operational reliability. At the semiannual check, the scrubbing solution recirculation flow switch position (i.e., the switch is either "made" or "not made") shall be verified and documented. "Made" means the scrubbing solution is flowing at the rate equal to or greater than 15 gallons per minute. "Not made" indicates that there is no pressure or a flow rate less than 15 gallons per minute. The permittee shall maintain records of the semiannual checks for actuation of the flow switch.
3. The permittee shall collect and record the following information, in averaged 1-hour blocks, when this emissions unit is in operation (graphite flake is being fed):
 - a. the pH levels of the alkaline sodium hydroxide scrubbing in the first stage of each operating scrubber control system;
 - b. the pH levels of the alkaline sodium hydroxide scrubbing solution in the second stage of each operating scrubber control system;
 - c. the ORP levels of the alkaline sodium hypochlorite scrubbing solution in the second stage of each operating scrubber control system;
 - d. the pressure drop across each operating scrubber control system; and
 - e. the scrubbing solution recirculation flow rate of each operating scrubber control system.
4. The permittee shall collect and record the following information for each month for this emissions units:

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- a. the quantity and type of graphite flake fed to this emissions unit, in tons;
- b. the total particulate, SO₂, CO, and NO_x emissions, in pounds and tons (calculated using the data from section A.III.4.a above and the formulas and production scenario related emissions factors specified below);
- c. the total operating shifts and calculated hours of operations for this emissions unit (8 hours equals one shift);
- d. the average hourly particulate, SO₂, CO, and NO_x emissions rate for this emissions unit, in pounds (from sections A.III.4.a through A.III.4.c above or from the average hourly emissions rates for the appropriate operating scenario from the most recent emissions tests that demonstrated that the emissions unit was in compliance);
- e. the total particulate, SO₂, CO, and NO_x emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the summation of the data from section A.III.4.b above for each emissions unit); and
- f. the rolling, 12-month summation of the particulate, SO₂, CO, and NO_x emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the total particulate, SO₂, CO, and NO_x emissions from all four rolling lines for the current month plus the total particulate, SO₂, CO, and NO_x emissions from all four rolling lines for the previous 11 months).

The total monthly particulate, SO₂, CO, and NO_x emissions for each production scenario shall be calculated in accordance with the following formulas for the rolling line:

Particulate Emissions (PE)

Total tons of PE per month = the summation of (tons of graphite flake fed) X (the appropriate PE emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

SO₂ Emissions

Total tons of SO₂ per month = the summation of (tons of graphite flake fed) X (the appropriate SO₂ emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

Total tons of CO per month = the summation of (tons of graphite flake fed) X (the appropriate CO emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

NO_x Emissions

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Total tons of NO_x per month = the summation of (tons of graphite flake fed) X (the appropriate NO_x emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

Production scenario #1 is defined as a graphite flake input of 50 mesh flake.

Production scenario #2 is defined as a graphite flake input of 80 mesh flake.

Production scenario #3 is defined as a graphite flake input of 20% regrind and/or trial flakes other than 50 or 80 mesh.

Any new production scenario shall require the notification of or the review and prior approval of the Cleveland Division of Air Quality (Cleveland DAQ).

Processing Scenario	Emission Factor (EF)
#1, #2, and #3	0.036 pound of PE per ton of graphite flake
#1, #2, and #3	0.045 pound of SO ₂ per ton of graphite flake
#1, #2, and #3	5.225 pounds of NO _x per ton of graphite flake
#1, #2, and #3	25.77 pounds of CO per ton of graphite flake

These emission factors may be updated based on results of emission testing which demonstrates compliance with the emission limitations in section A.I.1.

5. The permittee shall collect and record the following information each month for all four rolling lines (P023, P024, P025, and P026):
 - a. the graphite flake material usage for each month, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines; and
 - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the graphite material usage figures and the corresponding percentage of the potential feed rate for the combined four rolling lines.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the emissions unit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.
2. The permittee shall notify the Cleveland DAQ in writing of any record showing that the scrubber was not in service while the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30

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days after the event occurs.

3. The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:
 - a. all scrubber control system pressure drop 1-hour block averages* less than 0.8 inch of water column;
 - b. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 7.0 in the first stage of the scrubber control system;
 - c. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 8.0 in the second stage of the scrubber control system;
 - d. all ORP 1-hour block averages* of the alkaline sodium hypochlorite scrubbing solution less than positive (+) 700 millivolts in the second stage of the scrubber control system;
 - e. any 1-hour block average* indicating that the scrubbing solution recirculation flow switch was "not made" when the emissions unit was in operation;
 - f. any exceedances of the average hourly emission limitations for the rolling line; and
 - g. any exceedances of the rolling, 12-month emission limitation for all four rolling lines (P023, P024, P025, and P026), combined.

Note: *Any 1-hour block average containing 5-minutes or less of operation time (when graphite flake is being fed) for the entire hour will not be reported as a deviation (excursion).

The quarterly reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

4. The permittee shall also submit annual reports to the Cleveland DAQ that specify the total particulate, SO₂, CO, and NO_x emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year or by the deadline designated by the annual air fee emissions requirement if the deadline differs from April 15. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual air fee emission report.
5. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation on the graphite material feed rate, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum

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allowable cumulative graphite material feed rate, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

V. Testing Requirements

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

- a. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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Applicable Compliance Method:

If required by the Ohio EPA or Cleveland DAQ, compliance shall be determined through visible emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Test Method 9.

b. Emission Limitation:

PE shall not exceed 0.98 pound per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

c. Emission Limitation:

SO₂ emissions shall not exceed 6.8 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

d. Emission Limitation:

NO_x emissions shall not exceed 11.26 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

e. Emission Limitation:

CO emissions shall not exceed 55.53 pounds per hour.

Applicable Compliance Method:

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Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

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f. Emission Limitation:

Particulate emissions shall not exceed 4.3 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (0.98 pound per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

g. Emission Limitation:

SO₂ emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (6.8 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

h. Emission Limitation:

NO_x emissions shall not exceed 49.32 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (11.26 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

i. Emission Limitation:

CO emissions shall not exceed 243.22 tons per year.

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Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (55.53 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

j. Emission Limitation:

Particulate emissions shall not exceed 4.3 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

k. Emission Limitation:

SO₂ emissions shall not exceed 72.0 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

l. Emission Limitation:

NO_x emissions shall not exceed 78.0 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

m. Emission Limitation:

CO emissions shall not exceed 245.0 tons per year as a rolling, 12-month

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summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 90 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 270 days after initial startup of the emissions unit.
 - b. The emission testing shall be conducted for the scrubber control system serving emissions units P023, P024, P025, and P026 to demonstrate compliance with the PE, SO₂, NO_x, and CO emission limitations for emissions units P023, P024, P025, and P026. (Emissions units P023, P024, P025, and P026 are identical emissions units; therefore, the permittee may test only one of these emissions units and the results will be representative of the emissions for each of the identical emissions units).
 - c. The following test methods shall be employed to demonstrate compliance with the emission limitations:

Method 1 through 5 of 40 CFR Part 60, Appendix A for PE;
Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A for SO₂;
Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x; and
Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Cleveland DAQ.
 - d. Test(s) shall be conducted while emissions unit P023, P024, P025, or P026 is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.
 - e. The tons of graphite flake fed and the production scenario(s) operated under during the emission testing shall also be recorded.
 - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the

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Cleveland DAQ's refusal to accept the results of the emission test(s).

- g. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), 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.
- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

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VI. Miscellaneous Requirements

none

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B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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

none

II. Operational Restrictions

none

III. Monitoring and/or Recordkeeping Requirements

none

IV. Reporting Requirements

none

V. Testing Requirements

none

VI. Miscellaneous Requirements

none

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
<p>P026 - Rolling line no. 6 for producing flexible graphite with two natural gas-fired furnaces (5.7 mmBtu/hr total) equipped with an in-line cyclone, Venturi quench and wet 2-stage scrubber control system</p> <p>Terms in this permit supercede those identified in PTI 13-02937 issued March 26, 2002</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>OAC rule 3745-31-05(C) Synthetic minor to avoid PSD</p>
		<p>OAC rule 3745-17-07(A) OAC rule 3745-17-11(B) OAC rule 3745-18-06(E) OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)</p>

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Applicable Emissions
Limitations/control
measures

Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.

Carbon monoxide emissions (CO) shall not exceed 55.53 pounds per hour and 243.22 tons per year.

Nitrogen oxide emissions (NOx) shall not exceed 11.26 pounds per hour and 49.32 tons per year.

Sulfur dioxide emissions (SO2) shall not exceed 6.8 pounds per hour and 29.8 tons per year.

Particulate emissions (PE) shall not exceed 0.98 pound per hour and 4.3 tons per year.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-21-08(B), and 3745-23-06(B)
 See section A.II.1 below.

CO emissions shall not exceed 245.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the CO emissions.

NOx emissions shall not exceed 78.0 tons per year (combined for P023, P024, P025, and P026) as a

rolling, 12-month summation of the NOx emissions.

SO2 emissions shall not exceed 72.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the SO2 emissions.

PE shall not exceed 4.3 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the PE emissions.

See sections A.I.2.d and A.II.9 below.

See section A.I.2.a below.
 See section A.I.2.a below.
 See section A.I.2.a below.
 See section A.I.2.b below.
 See section A.I.2.c below.

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b** The permit shall satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, the rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirements to satisfy the "best available control techniques and operating practices" still exists as part of the Federally-approved SIP of Ohio.

- 2.c** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.d** The tons per year emission limitations for PE, SO₂, CO, and NO_x are based on a synthetic minor determination.

II. Operational Restrictions

1. The permittee shall burn only natural gas in the furnaces associated with this emissions unit.
2. The scrubber control system shall be in operation whenever the associated rolling line is in operation (graphite flake is being fed).
3. The pressure drop across the scrubber control system shall be maintained at an hourly average of 0.8 inch of water column or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
4. The pH of the alkaline sodium hydroxide scrubbing in the first stage of the scrubber

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control system shall be maintained at an hourly average of 7.0 or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).

5. The pH of the alkaline sodium hydroxide scrubbing solution in the second stage of the scrubber control system shall be maintained at an hourly average of 8.0 or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
6. The oxidation and reduction potential (ORP) of the second stage alkaline sodium hypochlorite scrubbing solution shall be maintained at an hourly average of positive (+) 700 millivolts or greater, whenever the associated rolling line is in operation. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
7. The scrubbing solution recirculation flow rate to the scrubber control system shall be maintained at an hourly average of 15 gallons per minute or greater (as verified by the record keeping in section A.III.2), whenever the associated rolling line is in operation and shall be monitored by the flow switch located at the discharge line of the recirculation pump. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).
8. The particulate, SO₂, CO, and NO_x emissions (and the corresponding production rates calculated in section A.III.4) for the four rolling lines (P023, P024, P025, and P026), combined, shall not exceed the rolling, 12-month emission limitations specified in section A.I.1.
9. The annual graphite material feed rate shall not exceed twenty-nine and two tenths percent (29.2%) of the potential feed rate for the combined four rolling lines (P023, P024, P025, and P026), based upon a rolling, 12-month summation of the graphite material feed rate.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Month	Maximum Allowable Cumulative Percentage of: Graphite Material Potential Feed Rate for the Combined Four Rolling Lines (P023, P024, P025, and P026)
1	5.00%
1-2	7.43%

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1-	3	9.86%
1-	4	12.29%
1-	5	14.72%
1-	6	17.15%
1-	7	19.58%
1-	8	22.10%
1-	9	24.44%
1-	10	26.87%
1-	11	29.20%
1-	12	29.20%

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III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall properly operate and maintain equipment to monitor and record the pH, pressure drop across the scrubber, ORP, and recirculation flow rate for each of the scrubber control systems when this emissions unit is in operation. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturers' recommendations, instructions and operating manual(s) with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The recirculation flow switch shall be checked semiannually for functional and operational reliability. At the semiannual check, the scrubbing solution recirculation flow switch position (i.e., the switch is either "made" or "not made") shall be verified and documented. "Made" means the scrubbing solution is flowing at the rate equal to or greater than 15 gallons per minute. "Not made" indicates that there is no pressure or a flow rate less than 15 gallons per minute. The permittee shall maintain records of the semiannual checks for actuation of the flow switch.
3. The permittee shall collect and record the following information, in averaged 1-hour blocks, when this emissions unit is in operation (graphite flake is being fed):
 - a. the pH levels of the alkaline sodium hydroxide scrubbing in the first stage of each operating scrubber control system;
 - b. the pH levels of the alkaline sodium hydroxide scrubbing solution in the second stage of each operating scrubber control system;
 - c. the ORP levels of the alkaline sodium hypochlorite scrubbing solution in the second stage of each operating scrubber control system;
 - d. the pressure drop across each operating scrubber control system; and
 - e. the scrubbing solution recirculation flow rate of each operating scrubber control system.
4. The permittee shall collect and record the following information for each month for this emissions units:

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- a. the quantity and type of graphite flake fed to this emissions unit, in tons;
- b. the total particulate, SO₂, CO, and NO_x emissions, in pounds and tons (calculated using the data from section A.III.4.a above and the formulas and production scenario related emissions factors specified below);
- c. the total operating shifts and calculated hours of operations for this emissions unit (8 hours equals one shift);
- d. the average hourly particulate, SO₂, CO, and NO_x emissions rate for this emissions unit, in pounds (from sections A.III.4.a through A.III.4.c above or from the average hourly emissions rates for the appropriate operating scenario from the most recent emissions tests that demonstrated that the emissions unit was in compliance);
- e. the total particulate, SO₂, CO, and NO_x emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the summation of the data from section A.III.4.b above for each emissions unit); and
- f. the rolling, 12-month summation of the particulate, SO₂, CO, and NO_x emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the total particulate, SO₂, CO, and NO_x emissions from all four rolling lines for the current month plus the total particulate, SO₂, CO, and NO_x emissions from all four rolling lines for the previous 11 months).

The total monthly particulate, SO₂, CO, and NO_x emissions for each production scenario shall be calculated in accordance with the following formulas for the rolling line:

Particulate Emissions (PE)

Total tons of PE per month = the summation of (tons of graphite flake fed) X (the appropriate PE emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

SO₂ Emissions

Total tons of SO₂ per month = the summation of (tons of graphite flake fed) X (the appropriate SO₂ emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

Total tons of CO per month = the summation of (tons of graphite flake fed) X (the appropriate CO emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

NO_x Emissions

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Total tons of NO_x per month = the summation of (tons of graphite flake fed) X (the appropriate NO_x emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

Production scenario #1 is defined as a graphite flake input of 50 mesh flake.

Production scenario #2 is defined as a graphite flake input of 80 mesh flake.

Production scenario #3 is defined as a graphite flake input of 20% regrind and/or trial flakes other than 50 or 80 mesh.

Any new production scenario shall require the notification of or the review and prior approval of the Cleveland Division of Air Quality (Cleveland DAQ).

Processing Scenario	Emission Factor (EF)
#1, #2, and #3	0.036 pound of PE per ton of graphite flake
#1, #2, and #3	0.045 pound of SO ₂ per ton of graphite flake
#1, #2, and #3	5.225 pounds of NO _x per ton of graphite flake
#1, #2, and #3	25.77 pounds of CO per ton of graphite flake

These emission factors may be updated based on results of emission testing which demonstrates compliance with the emission limitations in Section A.I.1.

5. The permittee shall collect and record the following information each month for all four rolling lines (P023, P024, P025, and P026):
 - a. the graphite flake material usage for each month, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines; and
 - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the graphite material usage figures and the corresponding percentage of the potential feed rate for the combined four rolling lines.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the emissions unit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.
2. The permittee shall notify the Cleveland DAQ in writing of any record showing that the scrubber was not in service while the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30

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days after the event occurs.

3. The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:
 - a. all scrubber control system pressure drop 1-hour block averages* less than 0.8 inch of water column;
 - b. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 7.0 in the first stage of the scrubber control system;
 - c. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 8.0 in the second stage of the scrubber control system;
 - d. all ORP 1-hour block averages* of the alkaline sodium hypochlorite scrubbing solution less than positive (+) 700 millivolts in the second stage of the scrubber control system;
 - e. any 1-hour block average* indicating that the scrubbing solution recirculation flow switch was "not made" when the emissions unit was in operation;
 - f. any exceedances of the average hourly emission limitations for the rolling line; and
 - g. any exceedances of the rolling, 12-month emission limitation for all four rolling lines (P023, P024, P025, and P026), combined.

Note: *Any 1-hour block average containing 5-minutes or less of operation time (when graphite flake is being fed) for the entire hour will not be reported as a deviation (excursion).

The quarterly reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

4. The permittee shall also submit annual reports to the Cleveland DAQ that specify the total particulate, SO₂, CO, and NO_x emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year or by the deadline designated by the annual air fee emissions requirement if the deadline differs from April 15. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual air fee emission report.
5. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation on the graphite material feed rate, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum

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allowable cumulative graphite material feed rate, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

V. Testing Requirements

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

- a. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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Applicable Compliance Method:

If required by the Ohio EPA or Cleveland DAQ, compliance shall be determined through visible emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Test Method 9.

b. Emission Limitation:

PE shall not exceed 0.98 pound per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

c. Emission Limitation:

SO₂ emissions shall not exceed 6.8 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

d. Emission Limitation:

NO_x emissions shall not exceed 11.26 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

e. Emission Limitation:

CO emissions shall not exceed 55.53 pounds per hour.

Applicable Compliance Method:

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Compliance with this emissions unit limitation may be demonstrated based upon the records required pursuant to section A.III.4. Compliance shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

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f. Emission Limitation:

Particulate emissions shall not exceed 4.3 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (0.98 pound per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

g. Emission Limitation:

SO₂ emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (6.8 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

h. Emission Limitation:

NO_x emissions shall not exceed 49.32 tons per year.

Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (11.26 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

i. Emission Limitation:

CO emissions shall not exceed 243.22 tons per year.

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Applicable Compliance Method:

The ton per year emission limitation was developed by multiplying the hourly particulate emission rate (55.53 pounds per hour) by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

j. Emission Limitation:

Particulate emissions shall not exceed 4.3 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

k. Emission Limitation:

SO₂ emissions shall not exceed 72.0 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

l. Emission Limitation:

NO_x emissions shall not exceed 78.0 tons per year as a rolling, 12-month summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

m. Emission Limitation:

CO emissions shall not exceed 245.0 tons per year as a rolling, 12-month

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summation (combined for P023, P024, P025, and P026).

Applicable Compliance Method:

Compliance with this emission limitation shall be based upon the records required pursuant to section A.III.4.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 90 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 270 days after initial startup of the emissions unit.
 - b. The emission testing shall be conducted for the scrubber control system serving emissions units P023, P024, P025, and P026 to demonstrate compliance with the PE, SO₂, NO_x, and CO emission limitations for emissions units P023, P024, P025, and P026. (Emissions units P023, P024, P025, and P026 are identical emissions units; therefore, the permittee may test only one of these emissions units and the results will be representative of the emissions for each of the identical emissions units).
 - c. The following test methods shall be employed to demonstrate compliance with the emission limitations:

Method 1 through 5 of 40 CFR Part 60, Appendix A for PE;
Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A for SO₂;
Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x; and
Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Cleveland DAQ.
 - d. Test(s) shall be conducted while emissions unit P023, P024, P025, or P026 is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.
 - e. The tons of graphite flake fed and the production scenario(s) operated under during the emission testing shall also be recorded.
 - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the

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Cleveland DAQ's refusal to accept the results of the emission test(s).

- g. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), 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.
- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

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VI. Miscellaneous Requirements

none

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

none

II. Operational Restrictions

none

III. Monitoring and/or Recordkeeping Requirements

none

IV. Reporting Requirements

none

V. Testing Requirements

none

VI. Miscellaneous Requirements

none