



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

04/01/04

**RE: Proposed Title V Chapter 3745-77 Permit
13-18-28-1215
Advanced Energy Technology Inc**

Attn: Genevieve Damico AR-18J
United States Environmental Protection Agency
Region V
77 West Jackson Blvd.
Chicago, IL 60604-3590

Dear Ms. Damico:

The proposed issuance of the Title V permit for Advanced Energy Technology Inc, has been created in Ohio EPA's State Air Resources System (STARS) on 04/01/04, for review by USEPA. This proposed action is identified in STARS as  3-Title V Proposed Permit T+C covering the facility specific terms and conditions, and  Title V Proposed Permit covering the general terms and conditions. This proposed permit will be processed for issuance as a final action after forty-five (45) days from USEPA's receipt of this certified letter if USEPA does not object to the proposed permit. Please contact me at (614) 644-3631 by the end of the forty-five (45) day review period if you wish to object to the proposed permit.

Very truly yours,


Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

cc: Cleveland Division of Air Pollution Control
File, DAPC PMU



State of Ohio Environmental Protection Agency

PROPOSED TITLE V PERMIT

Issue Date: 04/01/04	Effective Date: To be entered upon final issuance	Expiration Date: To be entered upon final issuance
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This document constitutes issuance of a Title V permit for Facility ID: 13-18-28-1215 to:
 Advanced Energy Technology Inc
 11709 Madison Ave
 Lakewood, OH 44107

Emissions Unit ID (Company ID)/Emissions Unit Activity Description

P016 (Rolling Line 2) Flexible graphite rolling line. (PTI 13-02567)	Flexible graphite rolling line (Formerly part of P001) (PTI 13-02937)	Flexible graphite rolling line (Formerly part of P001) (PTI 13-02937)
P017 (Edge Trim System (RL and Fab Scrap Collection)) Rolling Line and Fab Dept. Scrap Collection (PTI 13-3054, formerly Z011 in Title V application).	P024 (Rolling Line 4) Flexible graphite rolling line (Formerly part of P001) (PTI 13-02937)	P029 (Heat Shield Fabrication Area) (Formerly Z003). Heat Shield Assembly for processing in P015.
P018 (East Acid Treat System) Treatment of Graphite Flake (PTI 13-3054, formerly Z015 in Title V Application).	P025 (Rolling Line 5) Flexible graphite rolling line (Formerly part of P001) (PTI 13-02937)	P030 (Hand Gluing) (Formerly Z005). Hand glueing of flexible graphite.
P023 (Rolling Line 3)	P026 (Rolling Line 6)	

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Cleveland Division of Air Pollution Control
 1925 St. Clair
 Cleveland, OH 44114
 (216) 664-2324

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
 Director

PART I - GENERAL TERMS AND CONDITIONS

A. *State and Federally Enforceable Section*

1. **Monitoring and Related Record Keeping and Reporting Requirements**

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.III of Part III of this Title V permit, 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.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 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.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c. The permittee shall submit required reports in the following manner:

- i. **All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:**

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter.

In accordance with OAC rule 3745-15-06, a malfunction constitutes a violation of an emission limitation (or control requirement) and, therefore, is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II of this Title V permit, all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. OAC rule 3745-77-07(A)(3)(c) is not fully satisfied until the permittee addresses all other deviations of the federally enforceable requirements specified in the permit.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement overrides the reporting requirements specified in this General Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this General Term and Condition.

See B.6 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- iii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Written reports that identify all other deviations of the federally enforceable requirements contained in this permit, including the monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be

submitted to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with General Term and Condition A.1.c.ii above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii))

- iv. 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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))
- v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

2. **Scheduled Maintenance**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in General Term and Condition A.1.c.i above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. **Risk Management Plans**

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a. a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b. as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

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.

(Authority for term: OAC rule 3745-77-07(A)(5))

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.

(Authority for term: OAC rule 3745-77-07(A)(6))

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 reissuance, or modification, or for denial of a permit renewal application.
- 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, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. 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, reopening 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.

(Authority for term: OAC rule 3745-77-07(A)(7))

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.

(Authority for term: OAC rule 3745-77-07(A)(8))

8. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

9. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

10. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

11. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of 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, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

(Authority for term: OAC rule 3745-77-07(B))

12. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V 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 paragraph (E) of OAC rule 3745-77-03.
 - 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.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
- i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - ii. Compliance certifications shall include the following:
 - (a) An identification of each term or condition of this permit that is the basis of the certification.
 - (b) The permittee's current compliance status.
 - (c) Whether compliance was continuous or intermittent.
 - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
 - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
 - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

13. Permit Shield

- a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local

air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).
(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.
(Authority for term: OAC rule 3745-77-07(G))

16. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA. Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

18. Insignificant Activities

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

19. Permit to Install Requirement

Prior to the “installation” or “modification” of any “air contaminant source,” as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31. *(Authority for term: OAC rule 3745-77-07(A)(1))*

20. Air Pollution Nuisance

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. *(Authority for term: OAC rule 3745-77-07(A)(1))*

21. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification by the responsible official of the date on which the emissions unit was permanently shut down. Authorization to operate the affected part or activity of the stationary source shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

If an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent “modification” or “installation” as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an “emissions unit” as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any monitoring, record keeping, reporting, or testing requirements, applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

B. State Only Enforceable Section

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping 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 (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) 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. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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., 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.)

2. Records Retention Requirements

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.

3. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

4. 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 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. 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 emissions unit(s) that is (are) served by such control system(s).

5. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

6. 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 emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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 by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a. where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in General Term and Condition A.1.c.ii;
- b. where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; and
- c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforceable Section

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

P015 - baking of graphite sheet materials with an organic compound adhesives in a 1.04 mmBtu/hr natural gas-fired oven; and

P020 - automated roll coater and natural gas-fired drying oven for the application of adhesive to flexible graphite sheets (Permit to Install 13-3468 - actual emissions are below the de minimis level).

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

B. State Only Enforceable Section

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements (as defined in OAC rule 3745-77-01(H)) or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

K001 - ink printing machine;

K002 - silk screening machine;

Z008 - band saws;

Z009 - CMC machine;

Z012 - product reuse system;

Z013 - blue goose effluent air;

Z014 - quality control lab;

Z016 - slitter/rewinder scrap collection system;

Z017 - package combustion units;

Z018 - heat shield trimming and double end roll trimming machine;

Z019 - Duall band saw;

Z022 - sandblast booth;

Z023 - east acid treat process chemical tanks;

Z024 - rolling line 3,4,5,6 process chemical tanks;

Z025 - east side bulk chemical truck unloading;

Z026 - west acid treat process chemical tanks;

Z027 - west side bulk chemical truck unloading;

Z028 - east side wastewater neutralization system;

Z029 - west side wastewater neutralization system;

Z030 - west caustic storage tank #1;

Z031 - west magnesium hydroxide tank;

Z032 - dust collector for IHM sources;

Z033 - 60" ink printing machine;

Z034 - coating line;

T001 - 6,000-gallon west sulfuric acid storage tank #1;

T003 - 6,000-gallon west sulfuric acid storage tank #2;

T004 - 8,000-gallon west nitric acid storage tank;

T006 - 6,000-gallon sodium hypochlorite storage tank;

B010 - east acid treat RBI Dominator hot water heater;

P028 - 24" x 24" heated platen press for heat curing graphite laminates; and

P031 - 60" x 48" heated platen press for heat curing graphite laminates.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Rolling Line 2 (P016)
Activity Description: Flexible graphite rolling line. (PTI 13-02567)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
graphite rolling line with a 5.7 mmBtu/hr natural gas-fired furnace with emissions controlled by a cyclone, water quench and a wet scrubber control system	OAC rule 3745-31-05(A)(3) (PTI 13-2567)	<p>Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.</p> <p>Particulate emissions (PE) shall not exceed 1.10 pounds per hour.</p> <p>Carbon monoxide (CO) emissions shall not exceed 18.0 pounds per hour.</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 2.70 pounds per hour.</p> <p>Sulfur dioxide (SO2) emissions shall not exceed 5.40 pounds per hour.</p> <p>Compliance with this rule also includes compliance with OAC rule 3745-31-05(C).</p> <p>See A.II.1 below.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-31-05(C) (PTI 13-2567)	PE shall not exceed 4.82 tons per year (TPY) as a rolling, 12-month summation of the particulate emissions. CO emissions shall not exceed 52.56 TPY as a rolling, 12-month summation of the CO emissions. NOx emissions shall not exceed 8.15 TPY as a rolling, 12-month summation of the NOx emissions. SO2 emissions shall not exceed 15.77 TPY as a rolling, 12-month summation of the SO2 emissions.
	OAC rule 3745-17-07(A)	See A.I.2.a below.
	OAC rule 3745-17-11(B)	See A.I.2.b below.
	OAC rule 3745-18-06(E)(1)	Pursuant to OAC rule 3745-18-06(C), this emissions unit is exempt from the requirements of this rule because the emissions unit's process weight rate is less than 1000 pounds per hour.
	OAC rule 3745-21-08(B)	See A.I.2.c below.
	OAC rule 3745-23-06(B)	See A.I.2.d below.

2. Additional Terms and Conditions

- 2.a** The TPY emission limitations for particulates, CO, NOx, and SO2 emissions are based on a synthetic minor determination.
- 2.b** 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.c** The permittee has 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) in Permit to Install 13-2567.

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, that 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 requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** 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) in Permit to Install 13-2567.

II. Operational Restrictions

1. The permittee shall burn only natural gas in the furnace associated with this emissions unit.
2. The permittee shall operate the wet scrubber control system whenever this emissions unit is in operation (graphite flake being fed) in accordance with the following parameters:
 - a. The pH of the alkaline sodium hydroxide scrubbing solution in the scrubber control system shall be maintained at an hourly average of 7.5 or greater, whenever the 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).
 - b. The scrubbing solution recirculation flow rate to the scrubber control system shall be maintained at 12 gallons per minute or greater (as verified by the record keeping in section A.III.2), whenever the rolling line is in operation, and shall be monitored by a flow switch located at the discharge line of the recirculation pump.
3. The particulate, SO₂, CO, and NO_x emissions (and the corresponding production rates calculated in section A.III.4) for the rolling line shall not exceed the rolling, 12-month emission limitations specified in section A.I.1.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel in this emissions unit.
2. The permittee shall properly operate and maintain equipment to monitor and record the pH and recirculation flow rate for the scrubber control system when this emissions unit is in operation. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s) with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The recirculation flow switch shall be checked semi-annually for functional and operational reliability. At this semi-annual 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 a rate equal to or greater than 12 gallons per minute - "not made" indicates that there is no pressure or a flow rate less than 12 gallons per minute. The permittee shall maintain records of the semi-annual checks for actuation of the flow switch.
3. The permittee shall collect and record the pH level of the alkaline sodium hydroxide scrubbing solution in the scrubber control system, in averaged 1-hour blocks, when this emissions unit is in operation (graphite flake is being fed).
4. The permittee shall collect and record the following information for each month for this emissions unit:
 - a. the quantity and type of graphite flake fed to the emissions unit, in tons;
 - b. the total particulate, SO₂, CO, and NO_x emissions for the emissions unit, in pounds and tons (calculated using the data from A.III.4.a above and the formulas and production scenario related emission factors specified below or using average pound/hour rates from compliance stack testing);
 - c. the total operating shifts and calculated hours of operation for this emissions unit (8 hours equals one shift);
 - d. the average hourly particulate, SO₂, CO, and NO_x emission rates for the rolling line, in pounds; and
 - e. the rolling, 12-month summation of the particulate, SO₂, CO, and NO_x emissions for the rolling line, in tons (i.e., the total particulate, SO₂, CO, and NO_x emissions from the rolling line for the current month plus the total particulate, SO₂, CO, and NO_x emissions from the rolling line for the previous 11 months).

III. Monitoring and/or Record Keeping Requirements (continued)

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/month = the summation of (tons of graphite flake fed) x (the appropriate PE EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

SO₂ Emissions

total tons of SO₂/month = the summation of (tons of graphite flake fed) x (the appropriate SO₂ EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

total tons of CO/month = the summation of (tons of graphite flake fed) x (the appropriate CO EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

NO_x Emissions

total tons of NO_x/month = the summation of (tons of graphite flake fed) x (the appropriate NO_x EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

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

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

Any new production scenario shall require the review and prior approval of the Cleveland DAQ.

Production Scenario	Emission Factor (EF)
#1	34.2 pounds CO/ton of graphite
#2	62.0 pounds CO/ton of graphite
#1 & #2	5.6 pounds NO _x /ton of graphite
#1 & #2	0.1 pound SO ₂ /ton of graphite
#1 & #2	0.33 pound PE/ton of graphite

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

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

IV. Reporting Requirements (continued)

2. The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:
 - a. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 7.5 in the scrubber control system;
 - b. any 1-hour block average* indicating that the scrubbing solution recirculation flow switch was "not made" when the emissions unit was in operation;
 - c. any exceedances of the hourly emission limitations for the rolling line; and
 - d. any exceedances of the rolling, 12-month emission limitations for the rolling line.

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

V. Testing Requirements

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

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.b Emission Limitation:

PE shall not exceed 1.10 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

- 1.c Emission Limitation:

PE shall not exceed 4.82 TPY as a rolling, 12-month summation of the particulate emissions.

Applicable Compliance Method:

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

- 1.d Emission Limitation:

CO emissions shall not exceed 18.0 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

V. Testing Requirements (continued)

- 1.e** Emission Limitation:
NOx emissions shall not exceed 2.70 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

- 1.f** Emission Limitation:
SO2 emissions shall not exceed 5.40 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

- 1.g** Emission Limitation:
CO emissions shall not exceed 52.56 TPY as a rolling, 12-month summation of the CO emissions.

Applicable Compliance Method:

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

- 1.h** Emission Limitation:
NOx emissions shall not exceed 8.15 TPY as a rolling, 12-month summation of the NOx emissions.

Applicable Compliance Method:

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

- 1.i** Emission Limitation:
SO2 emissions shall not exceed 15.77 TPY as a rolling, 12-month summation of the SO2 emissions.

Applicable Compliance Method:

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

V. Testing Requirements (continued)

2. Emission testing shall be conducted approximately 6 months after the effective date of this permit and within 6 months prior to permit expiration. The emission testing shall be conducted to demonstrate compliance with the SO₂, NO_x, CO and particulate emission limitations.

The following test methods shall be employed to demonstrate compliance with the emission limitations:

Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulate emissions;
Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A for SO₂ emissions;
Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x emissions; and
Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO emissions.
Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.

The tons of graphite fed and the production scenario(s) operated under during the emission testing shall also be recorded.

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

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.

A comprehensive written report on the results of the emission 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 test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Edge Trim System (RL and Fab Scrap Collection) (P017)

Activity Description: Rolling Line and Fab Dept. Scrap Collection (PTI 13-3054, formerly Z011 in Title V application).

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
GRAFOIL and fabrication scrap collection and air/solids separation system controlled by a 4,000 ACFM cartridge filter (dust collector) that is exhausted indoors	OAC rule 3745-31-05(A)(3) (PTI # 13-3054)	Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average.
	OAC rule 3745-17-07(A)	Particulate emissions shall not exceed 0.88 pound per hour and 3.85 tons per year (TPY).
	OAC rule 3745-17-11(B)	See section A.1.2.a below.

2. Additional Terms and Conditions

- 2.a The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

II. Operational Restrictions

- The pressure drop across the cartridge filter shall be maintained at an hourly average of 1 inch of water column or greater while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

- The permittee shall properly operate and maintain equipment to monitor the pressure drop across the cartridge filter when this emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s) with any modifications deemed necessary by the permittee. The permittee shall record the pressure drop across the cartridge filter on an hourly basis. (The pressure drop will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the emissions unit is in operation).

III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall record the following information on a monthly basis:
 - a. the quantity of material processed through rolling lines 2-6 (P016, and P023-P026), in lbs;
 - b. the quantity of material sent to the edge trim system from rolling lines 2-4 (P016, P023 and P024), in lbs, calculated as A.III.2.a multiplied by 0.60 (60% from lines 2-4) and by 0.08 (8% trimmed);
 - c. the quantity of material sent to the edge trim system from rolling lines 5 and 6 (P025 and P026), in lbs, calculated as A.III.2.a multiplied by 0.40 (40% from lines 5 and 6) and by 0.013 (1.3% trimmed);
 - d. the quantity of material sent to the edge trim system from the fabrication department, in lbs; and
 - e. the total quantity of material sent to the edge trim system, in lbs, calculated as A.III.2.b + A.III.2.c + A.III.2.d.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all 1-hour block averages* during which the pressure drop across the cartridge filter was less than 1 inch of water column.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

*Deviations are not required to be reported for any 1-hour block average containing 5 minutes or less of operation time for the entire hour.

2. The permittee shall also submit annual reports to the Cleveland DAQ that specify the total particulate emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. The reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

- 1.a Emission Limitation:
Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.b Emission Limitation:
Particulate emissions shall not exceed 0.88 pound per hour.

Applicable Compliance Method:

Compliance may be demonstrated based on the following equation:

$(\text{total quantity of material sent to the edge trim system from section A.III.2.e, in lbs}) \times (1 - 0.99^*) / (657 \text{ hrs/month}^{**})$

*estimated 99% control efficiency of the cartridge filter

**assumed number of operating hours per month

If required, compliance shall be determined through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

V. Testing Requirements (continued)

- 1.c** Emission Limitation:
Particulate emissions shall not exceed 3.85 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly particulate emission limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: East Acid Treat System (P018)

Activity Description: Treatment of Graphite Flake (PTI 13-3054, formerly Z015 in Title V Application).

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
east acid treat system for graphite flake processing with emissions controlled by a dust collector and a wet scrubber control system	OAC rule 3745-31-05(A)(3) (PTI #13-3054)	<p>Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.</p> <p>Particulate emissions shall not exceed 0.26 pound per hour and 1.14 tons per year (TPY).</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 3.57 pounds per hour and 15.64 TPY.</p> <p>Sulfur dioxide (SO2) emissions shall not exceed 0.51 pound per hour and 2.23 TPY.</p> <p>Carbon monoxide (CO) emissions shall not exceed 17.86 pounds per hour and 78.23 TPY.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.70 pound per hour and 3.07 TPY.</p>
	OAC rule 3745-17-07(A)	See A.I.2.a below.
	OAC rule 3745-17-11(B)	See A.I.2.b below.
	OAC rule 3745-18-06(E)(1)	See A.I.2.b below.
	OAC rule 3745-21-08(B)	See A.I.2.c below.
	OAC rule 3745-23-06(B)	See A.I.2.d below.

2. Additional Terms and Conditions

- 2.a** The Best Available Technology determination for this emissions unit under process scenarios #1 and #2 is control of particulate emissions generated by the conveyor with a 6,370 ACFM cartridge filter dust collector with a particulate emission control efficiency of 99%, by weight; control of particulate emissions generated by the dryer by a 8,500 ACFM cyclone and the exhaust of the cyclone together with the emissions of nitrogen oxides generated by the treatment system controlled by a 12,500 ACFM wet scrubber with alkaline sodium hydrosulfide solution with an emission scrubbing control efficiency of 65%, by weight for nitrogen oxides emissions (only under process scenarios #1 and #2).
- 2.b** 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.c** The permittee has 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) in Permit to Install 13-3054.

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, that 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 requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** 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) in Permit to Install 13-3054.

II. Operational Restrictions

1. The pressure drop across the cartridge filter dust collector shall be maintained at an hourly average of 0.25 inch of water column or greater while the emissions unit is in operation (i.e., when flake is being fed into the material treatment system). This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the emissions unit is in operation (graphite flake being fed).
2. The permittee shall operate the wet scrubber whenever this emissions unit is in operation (graphite flake is being fed) in accordance with the following parameters:
 - a. the pressure drop across the wet scrubber (across all 3 stages) shall be maintained at an hourly average of 1.0 inch of water column or greater. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the emissions unit is in operation (graphite flake being fed);
 - b. the pH of the alkaline sodium hydroxide scrubbing solution shall be maintained as defined in sections A.II.5, A.II.6, and A.II.7;
 - c. the oxidation reduction potential (ORP) of the alkaline sodium hydrosulfide scrubbing solution shall be maintained as defined in sections A.II.5, A.II.6, and A.II.7; and
 - d. the scrubbing solution recirculation flow rate to each of the 3 scrubber stages shall be maintained at 100 gallons per minute or greater (as verified by the record keeping in section A.III.1) whenever the emissions unit is in operation (graphite flake being fed) and shall be monitored by a flow switch located at the discharge line of each recirculation pump.
3. The permittee shall burn only natural gas in this emissions unit.
4. The 3-stage wet scrubber shall be operated under either Process Operating Scenario #1, Process Operating Scenario #2, or Process Operating Scenario #3 described below.

II. Operational Restrictions (continued)

5. For Process Operating Scenario #1, the following operating configuration of the 3-stage scrubbing system will be required when the emissions unit is in operation (i.e., when flake is being fed into the material treatment system):
 - a. Stage 1 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 1 shall be maintained at an hourly average of 9.0 or greater. The ORP of Stage 1 scrubbing solution shall be maintained at an hourly average of negative (-) 355 millivolts or less (i.e., can be more negative). This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the acid treat system is in operation (graphite flake being fed).
 - b. Stage 2 will be operated using a scrubbing solution of sodium hydroxide only. The pH of the scrubbing solution in Stage 2 shall be maintained at an hourly average of 8.0 or greater. The ORP of Stage 2 scrubbing solution is not regulated. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the acid treat system is in operation (graphite flake being fed).
 - c. Stage 3 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 3 shall be maintained at an hourly average of 9.0 or greater. The ORP of Stage 3 scrubbing solution shall be maintained at an hourly average of negative (-) 275 millivolts or less (i.e., can be more negative). This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the acid treat system is in operation (graphite flake being fed).
6. For Process Operating Scenario #2, the following operating configuration of the 3-stage scrubbing system will be required when the emissions unit is in operation (i.e., when flake is being fed into the material treatment system):
 - a. Stage 1 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 1 shall be maintained at an hourly average of 9.0 or greater. The ORP of Stage 1 scrubbing solution shall be maintained at an hourly average of negative (-) 395 millivolts or less (i.e., can be more negative). 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).
 - b. Stage 2 will be operated using a scrubbing solution of sodium chlorite and sodium hydroxide. The pH of the scrubbing solution in Stage 2 shall be maintained at an hourly average of less than 9.0. The ORP of Stage 2 scrubbing solution shall be maintained at an hourly average of positive (+) 300 millivolts or greater (i.e., can be more positive). 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).
 - c. Stage 3 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 3 shall be maintained at an hourly average of 9.0 or greater. The ORP of Stage 3 scrubbing solution shall be maintained at an hourly average of negative (-) 335 millivolts or less (i.e., can be more negative). 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).

II. Operational Restrictions (continued)

7. For Process Operating Scenario #3, the following operating configuration of the 3-stage scrubbing system will be required when the emissions unit is in operation (i.e., when flake is being fed into the material treatment system):
 - a. Stage 1 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 1 shall be maintained at an hourly average of 9.0 or greater. The ORP of Stage 1 scrubbing solution shall be maintained at an hourly average of negative (-) 80 millivolts or less (i.e., can be more negative). This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the acid treat system is in operation (graphite flake being fed).
 - b. Stage 2 will be operated using a scrubbing solution of sodium hydroxide only. The pH of the scrubbing solution in Stage 2 shall be maintained at an hourly average of 8.0 or greater. The ORP of Stage 2 scrubbing solution is not regulated. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the acid treat system is in operation (graphite flake being fed).
 - c. Stage 3 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 3 shall be maintained at an hourly average of 9.0 or greater. The ORP of Stage 3 scrubbing solution shall be maintained at an hourly average of negative (-) 80 millivolts or less (i.e., can be more negative). This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the acid treat system is in operation (graphite flake being fed).

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor and record the pH and recirculation flow rate for the scrubber control system when this emissions unit is in operation. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s) with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The recirculation flow switch shall be checked semi-annually for functional and operational reliability. At this semi-annual 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 a rate equal to or greater than 100 gallons per minute - "not made" indicates that there is no pressure or a flow rate less than 100 gallons per minute. The permittee shall maintain records of the semi-annual checks for actuation of the flow switch.
2. The permittee shall properly operate and maintain equipment to monitor and record the pressure drop across the cartridge filter dust collector when this emissions unit is in operation. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s) with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters.
3. 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.
4. The permittee shall maintain records that document when the scrubber control system is being operated pursuant to Process Operating Scenario #1, Process Operating Scenario #2, or Process Operating Scenario #3.

III. Monitoring and/or Record Keeping Requirements (continued)

5. The permittee shall collect and record the following information, in averaged 1-hour blocks, for the control equipment when the emissions unit is in operation (when graphite flake is being fed into the material treatment process):
 - a. the pH levels of the scrubbing solution in Stages 1, 2, and 3;
 - b. the ORP levels of the scrubbing solution in Stages 1, 2 (process operating scenario #2 only), and 3, in negative or positive millivolts, as appropriate;
 - c. the pressure drop readings across all 3 stages of the scrubber system, in inches of water column; and
 - d. the pressure drop readings across the cartridge filter dust collector, in inches of water column.
6. The permittee shall record the amount of graphite flake fed into the emissions units, in tons, on a monthly basis.
7. The permittee shall maintain records of the calibrations and verifications for the ORP and pH control systems associated with this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:
 - a. all pH 1-hour block averages* of Stage 1 scrubbing solution less than 9.0 when in Process Operating Scenario #1, Process Operating Scenario #2, and Process Operating Scenario #3;
 - b. all pH 1-hour block averages* of Stage 2 scrubbing solution less than 8.0 when in Process Operating Scenario #1, greater than 9.0 when in Process Operating Scenario #2, and less than 8.0 when in Process Operating Scenario #3;
 - c. all pH 1-hour block averages* of Stage 3 scrubbing solution less than 9.0 when in Process Operating Scenario #1, Process Operating Scenario #2, and Process Operating Scenario #3;
 - d. all ORP 1-hour block averages* of Stage 1 scrubbing solution greater than negative 355 (more positive than -355) when in Process Operating Scenario #1, greater than negative 395 (more positive than -395) when in Process Operating Scenario #2, and greater than negative 80 (more positive than negative 80) when in Process Operating Scenario #3;
 - e. all ORP 1-hour block averages* of Stage 2 scrubbing solution less than positive 300 when in Process Operating Scenario #2 - ORP for Scenario #1 or Scenario #3 is not regulated;

IV. Reporting Requirements (continued)

- f. all ORP 1-hour block averages* of Stage 3 scrubbing solution greater than negative 275 (more positive than -275) when in Process Operating Scenario #1, greater than negative 335 (more positive than -335) when in Process Operating Scenario #2, and greater than negative 80 (more positive than negative 80) when in Process Operation Scenario #3;
- g. all 1-hour block averages* of pressure drop across all 3 stages of the scrubber system less than 1.0 inch of water column;
- h. all 1-hour block averages* of pressure drop across the cartridge filter dust collector less than 0.25 inch of water column; and
- i. any 1-hour block average* where the recirculation pressure/flow switch was "not made" in Stages 1, 2, or 3.

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

- 2. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

- 1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitations:
Particulate emissions shall not exceed 0.26 pound per hour and 1.14 TPY.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

The annual emission limitation was established by multiplying the hourly particulate emission limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

- 1.b Emission Limitations:
NOx emissions shall not exceed 3.57 pounds per hour and 15.64 TPY.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

The annual emission limitation was established by multiplying the hourly particulate emission limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

V. Testing Requirements (continued)

- 1.c** Emission Limitations:
SO₂ emissions shall not exceed 0.51 pound per hour and 2.23 TPY.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

The annual emission limitation was established by multiplying the hourly particulate emission limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

- 1.d** Emission Limitations:
CO emissions shall not exceed 17.86 pounds per hour and 78.23 TPY.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

The annual emission limitation was established by multiplying the hourly particulate emission limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

- 1.e** Emission Limitations:
VOC emissions shall not exceed 0.70 pound per hour and 3.07 TPY.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

The annual emission limitation was established by multiplying the hourly particulate emission limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation may be assumed provided compliance is maintained with the hourly emission limitation.

- 1.f** Emission Limitation:
Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

2. Emission testing shall be conducted approximately 12 months after the effective date of this permit and within 6 months prior to permit expiration. The emission testing shall be conducted to demonstrate compliance with the VOC, SO₂, NO_x, CO, and particulate emission limitations.

The following test methods shall be employed to demonstrate compliance with the emission limitations:

Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates;
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;
Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO; and
Methods 1 through 4 and 25 of 40 CFR Part 60, Appendix A for VOC.
Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.

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

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.

A comprehensive written report on the results of the emission 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 test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Rolling Line 3 (P023)

Activity Description: Flexible graphite rolling line (Formerly part of P001) (PTI 13-02937)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
rolling line no. 3 for producing flexible graphite with two (5.7 mmBtu/hr each) natural gas-fired furnaces equipped with an in-line cyclone, venturi quench and wet 2-stage scrubber control system	OAC rule 3745-31-05(A)(3) (PTI 13-2937)	<p>Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.</p> <p>Particulate emissions (PE) shall not exceed 0.98 pound per hour and 4.3 tons per year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 6.8 pounds per hour and 29.8 tons per year.</p> <p>Carbon monoxide (CO) emissions shall not exceed 57.2 pounds per hour and 250.5 tons per year.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 8.10 pounds per hour and 35.5 tons per year.</p> <p>Compliance with this rule also includes compliance with OAC rule 3745-31-05(C).</p> <p>See A.I.2.d and A.II.1 below.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-31-05(C) (PTI 13-2937)	PE shall not exceed 4.3 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the particulate emissions. SO ₂ emissions shall not exceed 75.52 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the SO ₂ emissions. CO emissions shall not exceed 264 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the CO emissions. NO _x emissions shall not exceed 72.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the NO _x emissions.
	OAC rule 3745-17-07(A)	See A.I.2.e below.
	OAC rule 3745-17-11(B)	See A.I.2.a below.
	OAC rule 3745-18-06(E)	See A.I.2.a below.
	OAC rule 3745-21-08(B)	See A.I.2.b below.
	OAC rule 3745-23-06(B)	See 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).
- 2.b** The permittee has 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) in Permit to Install 13-2937.

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, that 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 requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for 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) in Permit to Install 13-2937.
- 2.d** The minimum SO₂ control efficiency for each scrubber control system shall be 85%, by weight.

2. Additional Terms and Conditions (continued)

- 2.e** The tons per year (TPY) limitations for particulates, 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 solution 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).
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 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 a flow switch located at the discharge line of the recirculation pump.
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, combined, shall not exceed the rolling, 12-month emission limitations specified in section A.I.1.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall properly operate and maintain equipment to monitor and record the pH, pressure drop, 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 manufacturer's 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 semi-annually for functional and operational reliability. At this semi-annual 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 a 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 semi-annual checks for actuation of the flow switch.

III. Monitoring and/or Record Keeping Requirements (continued)

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 solution 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 scrubber control system;
 - c. the ORP levels of the alkaline hypochlorite scrubbing solution in the second stage of each operating scrubber control system; and
 - d. the pressure drop across each operating scrubber control system.
4. The permittee shall collect and record the following information for each month for this emissions unit:
 - 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 emission factors specified below);
 - c. the total operating shifts and calculated hours of operation for this emissions unit (8 hours equals one shift);
 - d. the average hourly particulate, SO₂, CO, and NO_x emission rates for this emissions unit, in pounds (from sections A.III.4.a through A.III.4.c above or from the average hourly emission rates for the appropriate operating scenario from the most recent emission 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 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).

III. Monitoring and/or Record Keeping Requirements (continued)

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/month = the summation of (tons of graphite flake fed) x (the appropriate PE EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

SO₂ Emissions

total tons of SO₂/month = the summation of (tons of graphite flake fed) x (the appropriate SO₂ EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

total tons of CO/month = the summation of (tons of graphite flake fed) x (the appropriate CO EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

NO_x Emissions

total tons of NO_x/month = the summation of (tons of graphite flake fed) x (the appropriate NO_x EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

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

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

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

Any new production scenario shall require the review and prior approval of the Cleveland DAQ.

Production Scenario	Emission Factor (EF)
#1	34.2 pounds CO/ton of graphite
#2	72.7 pounds CO/ton of graphite
#3	106 pounds CO/ton of graphite
#1, #2 & #3	15 pounds NO _x /ton of graphite
#1, #2 & #3	12.6 pounds SO ₂ /ton of graphite
#1, #2 & #3	0.3 pound PE/ton of graphite

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

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 this emissions unit. Each report shall be submitted to the Cleveland Division of Air Quality (DAQ) within 30 days after the deviation occurs.

IV. Reporting Requirements (continued)

2. 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 systems;
 - 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 systems;
 - 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 systems;
 - 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 limitations for all four rolling lines (P023, P024, P025, and P026), combined.

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

3. 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. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.b Emission Limitation:
Particulate emissions shall not exceed 0.98 pound per hour.

Applicable Compliance Method:

Compliance with this emission 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.

V. Testing Requirements (continued)

1.c Emission Limitation:

SO₂ emissions shall not exceed 6.8 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

1.d Emission Limitation:

CO emissions shall not exceed 57.2 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

1.e Emission Limitation:

NO_x emissions shall not exceed 8.10 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

1.f Emission Limitation:

4.3 TPY of particulate emissions.

Applicable Compliance Method:

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

1.g Emission Limitation:

75.52 TPY of SO₂ emissions.

Applicable Compliance Method:

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

1.h Emission Limitation:

250.5 TPY of CO emissions.

Applicable Compliance Method:

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

V. Testing Requirements (continued)

- 1.i** Emission Limitation:
35.5 TPY of NO_x emissions.

Applicable Compliance Method:

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

- 1.j** Emission Limitation:
NO_x emissions shall not exceed 72.0 TPY 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.

- 1.k** Emission Limitation:
CO emissions shall not exceed 264 TPY 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.

- 1.l** Emission Limitation:
SO₂ emissions shall not exceed 75.52 TPY 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.

- 1.m** Emission Limitation:
Particulate emissions shall not exceed 4.3 TPY 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.

- 1.n** Emission Limitation:
The minimum SO₂ control efficiency for each scrubber control system shall be 85%, by weight.

Applicable Compliance Method:

Compliance with this control efficiency requirement shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

V. Testing Requirements (continued)

2. Emission testing shall be conducted approximately 6 months after the effective date of this permit and within 6 months prior to permit expiration. The emission testing shall be conducted for the scrubber control system serving emissions unit P023, P024, P025, or P026 to demonstrate compliance with the SO₂, NO_x, CO and particulate hourly emission limitations and the SO₂ control efficiency requirement 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).

The following test methods shall be employed to demonstrate compliance with the emission limitations and control efficiency requirement:

Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates;
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 Ohio EPA.

The 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.

The tons of graphite fed and the Production Scenario(s) operated under during the emission testing shall also be recorded.

Compliance with the SO₂ control efficiency requirement shall be demonstrated by performing SO₂ mass emission tests at the inlet and outlet of the scrubber control system serving emissions unit P023, P024, P025, or P026.

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

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.

A comprehensive written report on the results of the emission 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 test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Rolling Line 4 (P024)

Activity Description: Flexible graphite rolling line (Formerly part of P001) (PTI 13-02937)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
rolling line no. 4 for producing flexible graphite with two (5.7 mmBtu/hr each) natural gas-fired furnaces equipped with an in-line cyclone, venturi quench and wet 2-stage scrubber control system	OAC rule 3745-31-05(A)(3) (PTI 13-2937)	<p>Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.</p> <p>Particulate emissions (PE) shall not exceed 0.98 pound per hour and 4.3 tons per year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 6.8 pounds per hour and 29.8 tons per year.</p> <p>Carbon monoxide (CO) emissions shall not exceed 57.2 pounds per hour and 250.5 tons per year.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 8.10 pounds per hour and 35.5 tons per year.</p> <p>Compliance with this rule also includes compliance with OAC rule 3745-31-05(C).</p> <p>See A.I.2.d and A.II.1 below.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-31-05(C) (PTI 13-2937)	PE shall not exceed 4.3 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the particulate emissions. SO ₂ emissions shall not exceed 75.52 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the SO ₂ emissions. CO emissions shall not exceed 264 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the CO emissions. NO _x emissions shall not exceed 72.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the NO _x emissions.
	OAC rule 3745-17-07(A)	See A.I.2.e below.
	OAC rule 3745-17-11(B)	See A.I.2.a below.
	OAC rule 3745-18-06(E)	See A.I.2.a below.
	OAC rule 3745-21-08(B)	See A.I.2.b below.
	OAC rule 3745-23-06(B)	See 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).
- 2.b** The permittee has 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) in Permit to Install 13-2937.

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, that 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 requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for 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) in Permit to Install 13-2937.
- 2.d** The minimum SO₂ control efficiency for each scrubber control system shall be 85%, by weight.

2. Additional Terms and Conditions (continued)

- 2.e** The tons per year (TPY) limitations for particulates, 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 solution 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).
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 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 a flow switch located at the discharge line of the recirculation pump.
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, combined, shall not exceed the rolling, 12-month emission limitations specified in section A.I.1.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall properly operate and maintain equipment to monitor and record the pH, pressure drop, 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 manufacturer's 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 semi-annually for functional and operational reliability. At this semi-annual 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 a 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 semi-annual checks for actuation of the flow switch.

III. Monitoring and/or Record Keeping Requirements (continued)

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 solution 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 scrubber control system;
 - c. the ORP levels of the alkaline hypochlorite scrubbing solution in the second stage of each operating scrubber control system; and
 - d. the pressure drop across each operating scrubber control system.
4. The permittee shall collect and record the following information for each month for this emissions unit:
 - 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 emission factors specified below);
 - c. the total operating shifts and calculated hours of operation for this emissions unit (8 hours equals one shift);
 - d. the average hourly particulate, SO₂, CO, and NO_x emission rates for this emissions unit, in pounds (from sections A.III.4.a through A.III.4.c above or from the average hourly emission rates for the appropriate operating scenario from the most recent emission 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 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).

III. Monitoring and/or Record Keeping Requirements (continued)

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/month = the summation of (tons of graphite flake fed) x (the appropriate PE EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

SO₂ Emissions

total tons of SO₂/month = the summation of (tons of graphite flake fed) x (the appropriate SO₂ EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

total tons of CO/month = the summation of (tons of graphite flake fed) x (the appropriate CO EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

NO_x Emissions

total tons of NO_x/month = the summation of (tons of graphite flake fed) x (the appropriate NO_x EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

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

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

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

Any new production scenario shall require the review and prior approval of the Cleveland DAQ.

Production Scenario	Emission Factor (EF)
#1	34.2 pounds CO/ton of graphite
#2	72.7 pounds CO/ton of graphite
#3	106 pounds CO/ton of graphite
#1, #2 & #3	15 pounds NO _x /ton of graphite
#1, #2 & #3	12.6 pounds SO ₂ /ton of graphite
#1, #2 & #3	0.3 pound PE/ton of graphite

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

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 this emissions unit. Each report shall be submitted to the Cleveland Division of Air Quality (DAQ) within 30 days after the deviation occurs.

IV. Reporting Requirements (continued)

2. 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 systems;
 - 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 systems;
 - 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 systems;
 - 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 limitations for all four rolling lines (P023, P024, P025, and P026), combined.

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

3. 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. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.b Emission Limitation:

Particulate emissions shall not exceed 0.98 pound per hour.

Applicable Compliance Method:

Compliance with this emission 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.

V. Testing Requirements (continued)

1.c Emission Limitation:

SO₂ emissions shall not exceed 6.8 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

1.d Emission Limitation:

CO emissions shall not exceed 57.2 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

1.e Emission Limitation:

NO_x emissions shall not exceed 8.10 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

1.f Emission Limitation:

4.3 TPY of particulate emissions.

Applicable Compliance Method:

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

1.g Emission Limitation:

75.52 TPY of SO₂ emissions.

Applicable Compliance Method:

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

1.h Emission Limitation:

250.5 TPY of CO emissions.

Applicable Compliance Method:

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

V. Testing Requirements (continued)

- 1.i** Emission Limitation:
35.5 TPY of NO_x emissions.

Applicable Compliance Method:

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

- 1.j** Emission Limitation:
NO_x emissions shall not exceed 72.0 TPY 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.

- 1.k** Emission Limitation:
CO emissions shall not exceed 264 TPY 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.

- 1.l** Emission Limitation:
SO₂ emissions shall not exceed 75.52 TPY 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.

- 1.m** Emission Limitation:
Particulate emissions shall not exceed 4.3 TPY 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.

- 1.n** Emission Limitation:
The minimum SO₂ control efficiency for each scrubber control system shall be 85%, by weight.

Applicable Compliance Method:

Compliance with this control efficiency requirement shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

V. Testing Requirements (continued)

2. Emission testing shall be conducted approximately 6 months after the effective date of this permit and within 6 months prior to permit expiration. The emission testing shall be conducted for the scrubber control system serving emissions unit P023, P024, P025, or P026 to demonstrate compliance with the SO₂, NO_x, CO and particulate hourly emission limitations and the SO₂ control efficiency requirement 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).

The following test methods shall be employed to demonstrate compliance with the emission limitations and control efficiency requirement:

Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates;
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 Ohio EPA.

The 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.

The tons of graphite fed and the Production Scenario(s) operated under during the emission testing shall also be recorded.

Compliance with the SO₂ control efficiency requirement shall be demonstrated by performing SO₂ mass emission tests at the inlet and outlet of the scrubber control system serving emissions unit P023, P024, P025, or P026.

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

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.

A comprehensive written report on the results of the emission 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 test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Rolling Line 5 (P025)

Activity Description: Flexible graphite rolling line (Formerly part of P001) (PTI 13-02937)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
rolling line no. 5 for producing flexible graphite with two (5.7 mmBtu/hr each) natural gas-fired furnaces equipped with an in-line cyclone, venturi quench and wet 2-stage scrubber control system	OAC rule 3745-31-05(A)(3) (PTI 13-2937)	<p>Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.</p> <p>Particulate emissions (PE) shall not exceed 0.98 pound per hour and 4.3 tons per year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 6.8 pounds per hour and 29.8 tons per year.</p> <p>Carbon monoxide (CO) emissions shall not exceed 57.2 pounds per hour and 250.5 tons per year.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 8.10 pounds per hour and 35.5 tons per year.</p> <p>Compliance with this rule also includes compliance with OAC rule 3745-31-05(C).</p> <p>See A.I.2.d and A.II.1 below.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-31-05(C) (PTI 13-2937)	PE shall not exceed 4.3 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the particulate emissions. SO ₂ emissions shall not exceed 75.52 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the SO ₂ emissions. CO emissions shall not exceed 264 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the CO emissions. NO _x emissions shall not exceed 72.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the NO _x emissions.
	OAC rule 3745-17-07(A)	See A.I.2.e below.
	OAC rule 3745-17-11(B)	See A.I.2.a below.
	OAC rule 3745-18-06(E)	See A.I.2.a below.
	OAC rule 3745-21-08(B)	See A.I.2.b below.
	OAC rule 3745-23-06(B)	See 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).
- 2.b** The permittee has 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) in Permit to Install 13-2937.

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, that 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 requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for 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) in Permit to Install 13-2937.
- 2.d** The minimum SO₂ control efficiency for each scrubber control system shall be 85%, by weight.

2. Additional Terms and Conditions (continued)

- 2.e** The tons per year (TPY) limitations for particulates, 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 solution 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).
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 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 a flow switch located at the discharge line of the recirculation pump.
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, combined, shall not exceed the rolling, 12-month emission limitations specified in section A.I.1.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall properly operate and maintain equipment to monitor and record the pH, pressure drop, 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 manufacturer's 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 semi-annually for functional and operational reliability. At this semi-annual 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 a 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 semi-annual checks for actuation of the flow switch.

III. Monitoring and/or Record Keeping Requirements (continued)

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 solution 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 scrubber control system;
 - c. the ORP levels of the alkaline hypochlorite scrubbing solution in the second stage of each operating scrubber control system; and
 - d. the pressure drop across each operating scrubber control system.
4. The permittee shall collect and record the following information for each month for this emissions unit:
 - 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 emission factors specified below);
 - c. the total operating shifts and calculated hours of operation for this emissions unit (8 hours equals one shift);
 - d. the average hourly particulate, SO₂, CO, and NO_x emission rates for this emissions unit, in pounds (from sections A.III.4.a through A.III.4.c above or from the average hourly emission rates for the appropriate operating scenario from the most recent emission 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 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).

III. Monitoring and/or Record Keeping Requirements (continued)

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/month = the summation of (tons of graphite flake fed) x (the appropriate PE EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

SO₂ Emissions

total tons of SO₂/month = the summation of (tons of graphite flake fed) x (the appropriate SO₂ EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

total tons of CO/month = the summation of (tons of graphite flake fed) x (the appropriate CO EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

NO_x Emissions

total tons of NO_x/month = the summation of (tons of graphite flake fed) x (the appropriate NO_x EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

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

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

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

Any new production scenario shall require the review and prior approval of the Cleveland DAQ.

Production Scenario	Emission Factor (EF)
#1	34.2 pounds CO/ton of graphite
#2	72.7 pounds CO/ton of graphite
#3	106 pounds CO/ton of graphite
#1, #2 & #3	15 pounds NO _x /ton of graphite
#1, #2 & #3	12.6 pounds SO ₂ /ton of graphite
#1, #2 & #3	0.3 pound PE/ton of graphite

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

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 this emissions unit. Each report shall be submitted to the Cleveland Division of Air Quality (DAQ) within 30 days after the deviation occurs.

IV. Reporting Requirements (continued)

2. 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 systems;
 - 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 systems;
 - 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 systems;
 - 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 limitations for all four rolling lines (P023, P024, P025, and P026), combined.

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

3. 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. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.b Emission Limitation:
Particulate emissions shall not exceed 0.98 pound per hour.

Applicable Compliance Method:

Compliance with this emission 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.

V. Testing Requirements (continued)

1.c Emission Limitation:

SO₂ emissions shall not exceed 6.8 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

1.d Emission Limitation:

CO emissions shall not exceed 57.2 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

1.e Emission Limitation:

NO_x emissions shall not exceed 8.10 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

1.f Emission Limitation:

4.3 TPY of particulate emissions.

Applicable Compliance Method:

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

1.g Emission Limitation:

75.52 TPY of SO₂ emissions.

Applicable Compliance Method:

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

1.h Emission Limitation:

250.5 TPY of CO emissions.

Applicable Compliance Method:

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

V. Testing Requirements (continued)

- 1.i** Emission Limitation:
35.5 TPY of NO_x emissions.

Applicable Compliance Method:

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

- 1.j** Emission Limitation:
NO_x emissions shall not exceed 72.0 TPY 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.

- 1.k** Emission Limitation:
CO emissions shall not exceed 264 TPY 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.

- 1.l** Emission Limitation:
SO₂ emissions shall not exceed 75.52 TPY 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.

- 1.m** Emission Limitation:
Particulate emissions shall not exceed 4.3 TPY 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.

- 1.n** Emission Limitation:
The minimum SO₂ control efficiency for each scrubber control system shall be 85%, by weight.

Applicable Compliance Method:

Compliance with this control efficiency requirement shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

V. Testing Requirements (continued)

2. Emission testing shall be conducted approximately 6 months after the effective date of this permit and within 6 months prior to permit expiration. The emission testing shall be conducted for the scrubber control system serving emissions unit P023, P024, P025, or P026 to demonstrate compliance with the SO₂, NO_x, CO and particulate hourly emission limitations and the SO₂ control efficiency requirement 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).

The following test methods shall be employed to demonstrate compliance with the emission limitations and control efficiency requirement:

Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates;
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 Ohio EPA.

The 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.

The tons of graphite fed and the Production Scenario(s) operated under during the emission testing shall also be recorded.

Compliance with the SO₂ control efficiency requirement shall be demonstrated by performing SO₂ mass emission tests at the inlet and outlet of the scrubber control system serving emissions unit P023, P024, P025, or P026.

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

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.

A comprehensive written report on the results of the emission 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 test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Rolling Line 6 (P026)

Activity Description: Flexible graphite rolling line (Formerly part of P001) (PTI 13-02937)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
rolling line no. 6 for producing flexible graphite with two (5.7 mmBtu/hr each) natural gas-fired furnaces equipped with an in-line cyclone, venturi quench and wet 2-stage scrubber control system	OAC rule 3745-31-05(A)(3) (PTI 13-2937)	<p>Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.</p> <p>Particulate emissions (PE) shall not exceed 0.98 pound per hour and 4.3 tons per year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 6.8 pounds per hour and 29.8 tons per year.</p> <p>Carbon monoxide (CO) emissions shall not exceed 57.2 pounds per hour and 250.5 tons per year.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 8.10 pounds per hour and 35.5 tons per year.</p> <p>Compliance with this rule also includes compliance with OAC rule 3745-31-05(C).</p> <p>See A.I.2.d and A.II.1 below.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-31-05(C) (PTI 13-2937)	PE shall not exceed 4.3 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the particulate emissions. SO ₂ emissions shall not exceed 75.52 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the SO ₂ emissions. CO emissions shall not exceed 264 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the CO emissions. NO _x emissions shall not exceed 72.0 tons per year (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the NO _x emissions.
	OAC rule 3745-17-07(A)	See A.I.2.e below.
	OAC rule 3745-17-11(B)	See A.I.2.a below.
	OAC rule 3745-18-06(E)	See A.I.2.a below.
	OAC rule 3745-21-08(B)	See A.I.2.b below.
	OAC rule 3745-23-06(B)	See 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).
- 2.b** The permittee has 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) in Permit to Install 13-2937.

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, that 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 requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for 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) in Permit to Install 13-2937.
- 2.d** The minimum SO₂ control efficiency for each scrubber control system shall be 85%, by weight.

2. Additional Terms and Conditions (continued)

- 2.e** The tons per year (TPY) limitations for particulates, 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 solution 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).
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 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 a flow switch located at the discharge line of the recirculation pump.
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, combined, shall not exceed the rolling, 12-month emission limitations specified in section A.I.1.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall properly operate and maintain equipment to monitor and record the pH, pressure drop, 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 manufacturer's 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 semi-annually for functional and operational reliability. At this semi-annual 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 a 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 semi-annual checks for actuation of the flow switch.

III. Monitoring and/or Record Keeping Requirements (continued)

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 solution 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 scrubber control system;
 - c. the ORP levels of the alkaline hypochlorite scrubbing solution in the second stage of each operating scrubber control system; and
 - d. the pressure drop across each operating scrubber control system.
4. The permittee shall collect and record the following information for each month for this emissions unit:
 - 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 emission factors specified below);
 - c. the total operating shifts and calculated hours of operation for this emissions unit (8 hours equals one shift);
 - d. the average hourly particulate, SO₂, CO, and NO_x emission rates for this emissions unit, in pounds (from sections A.III.4.a through A.III.4.c above or from the average hourly emission rates for the appropriate operating scenario from the most recent emission 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 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).

III. Monitoring and/or Record Keeping Requirements (continued)

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/month = the summation of (tons of graphite flake fed) x (the appropriate PE EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

SO₂ Emissions

total tons of SO₂/month = the summation of (tons of graphite flake fed) x (the appropriate SO₂ EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

total tons of CO/month = the summation of (tons of graphite flake fed) x (the appropriate CO EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

NO_x Emissions

total tons of NO_x/month = the summation of (tons of graphite flake fed) x (the appropriate NO_x EF) x (1 ton/2000 pounds) for each production scenario for the rolling line

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

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

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

Any new production scenario shall require the review and prior approval of the Cleveland DAQ.

Production Scenario	Emission Factor (EF)
#1	34.2 pounds CO/ton of graphite
#2	72.7 pounds CO/ton of graphite
#3	106 pounds CO/ton of graphite
#1, #2 & #3	15 pounds NO _x /ton of graphite
#1, #2 & #3	12.6 pounds SO ₂ /ton of graphite
#1, #2 & #3	0.3 pound PE/ton of graphite

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

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 this emissions unit. Each report shall be submitted to the Cleveland Division of Air Quality (DAQ) within 30 days after the deviation occurs.

IV. Reporting Requirements (continued)

2. 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 systems;
 - 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 systems;
 - 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 systems;
 - 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 limitations for all four rolling lines (P023, P024, P025, and P026), combined.

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

3. 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. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.b Emission Limitation:
Particulate emissions shall not exceed 0.98 pound per hour.

Applicable Compliance Method:

Compliance with this emission 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.

V. Testing Requirements (continued)

- 1.c** Emission Limitation:
SO₂ emissions shall not exceed 6.8 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

- 1.d** Emission Limitation:
CO emissions shall not exceed 57.2 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

- 1.e** Emission Limitation:
NO_x emissions shall not exceed 8.10 pounds per hour.

Applicable Compliance Method:

Compliance with this emission 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.

- 1.f** Emission Limitation:
4.3 TPY of particulate emissions.

Applicable Compliance Method:

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

- 1.g** Emission Limitation:
75.52 TPY of SO₂ emissions.

Applicable Compliance Method:

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

- 1.h** Emission Limitation:
250.5 TPY of CO emissions.

Applicable Compliance Method:

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

V. Testing Requirements (continued)

- 1.i** Emission Limitation:
35.5 TPY of NO_x emissions.

Applicable Compliance Method:

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

- 1.j** Emission Limitation:
NO_x emissions shall not exceed 72.0 TPY 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.

- 1.k** Emission Limitation:
CO emissions shall not exceed 264 TPY 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.

- 1.l** Emission Limitation:
SO₂ emissions shall not exceed 75.52 TPY 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.

- 1.m** Emission Limitation:
Particulate emissions shall not exceed 4.3 TPY 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.

- 1.n** Emission Limitation:
The minimum SO₂ control efficiency for each scrubber control system shall be 85%, by weight.

Applicable Compliance Method:

Compliance with this control efficiency requirement shall be demonstrated based upon the results of the emission testing specified in section A.V.2.

V. Testing Requirements (continued)

2. Emission testing shall be conducted approximately 6 months after the effective date of this permit and within 6 months prior to permit expiration. The emission testing shall be conducted for the scrubber control system serving emissions unit P023, P024, P025, or P026 to demonstrate compliance with the SO₂, NO_x, CO and particulate hourly emission limitations and the SO₂ control efficiency requirement 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).

The following test methods shall be employed to demonstrate compliance with the emission limitations and control efficiency requirement:

Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates;
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 Ohio EPA.

The 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.

The tons of graphite fed and the Production Scenario(s) operated under during the emission testing shall also be recorded.

Compliance with the SO₂ control efficiency requirement shall be demonstrated by performing SO₂ mass emission tests at the inlet and outlet of the scrubber control system serving emissions unit P023, P024, P025, or P026.

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

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.

A comprehensive written report on the results of the emission 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 test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Heat Shield Fabrication Area (P029)
Activity Description: (Formerly Z003). Heat Shield Assembly for processing in P015.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
heat shield fabrication area - hand assembly of products that are baked in the Kirk and Blum oven (P015)	OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8 pounds per hour and 40 pounds per day.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information for each day this emissions unit is in operation:
 - a. the company identification for each coating/adhesive and photochemically reactive cleanup material employed
 - b. the number of pounds of each coating/adhesive and photochemically reactive cleanup material employed;
 - c. the OC content of each coating/adhesive and photochemically reactive cleanup material, in percent by weight, as employed;
 - d. the total OC emission rate for all photochemically reactive cleanup materials, in pounds per day;
 - e. the total potential (prior to applying the coating operation/oven "split") daily OC emission rate for all coatings and/or adhesives, in pounds per day;
 - f. the total potential daily OC emission rate for all coatings and/or adhesives multiplied by the maximum percentage of the emissions associated with this coating operation (as defined in section A.III.2 of this permit - i.e., $(1)(e) \times 33/100$), in pounds per day;
 - g. the total OC emission rate for all coatings/adhesives and photochemically reactive cleanup materials, in pounds per day (i.e., the sum of the figures from items (d) and (f));
 - h. the total number of hours this coating operation was in operation; and
 - i. the average hourly OC emission rate for all coatings/adhesives and photochemically reactive cleanup materials, i.e., $(g)/(h)$, in pounds per hour (average).

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive" is based upon OAC rule 3745-21-01(C)(5).]

2. For purposes of calculating the OC emission rates for this coating operation and the associated oven (P015), the permittee shall utilize a value of 33% as the maximum percentage of the OC employed in this coating operation that are emitted uncontrolled from the coating operation. The remaining 67% of the OC employed in this coating operation shall be considered to be the uncontrolled emissions for the associated oven. This "split" of OC emissions between this coating operation and the associated oven is an engineering estimate made based upon the volatility of the OC used.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:
 - a. an identification of each day during which the average hourly OC emissions from the coatings/adhesives and photochemically reactive cleanup materials exceeded 8 pounds per hour, and the actual average hourly OC emissions for each such day; and
 - b. an identification of each day during which the OC emissions from the coatings/adhesives and photochemically reactive cleanup materials exceeded 40 pounds per day, and the actual OC emissions for each such day.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

V. Testing Requirements

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

V. Testing Requirements (continued)

2. Emission Limitations:
OC emissions shall not exceed 8 pounds per hour and 40 pounds per day.

Applicable Compliance Method:

Compliance with these emission limitations may be demonstrated based upon the records required pursuant to section A.III.1. If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25.

3. Formulation data or USEPA Method 24 shall be used to determine the OC contents of the coatings/adhesives and cleanup materials.

VI. Miscellaneous Requirements

1. The heat shields are formed in this emissions unit. The heat shields are then baked in emissions unit P015.

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Hand Gluing (P030)
Activity Description: (Formerly Z005). Hand glueing of flexible graphite.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
hand gluing of miscellaneous graphite sheets/shapes	OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8 pounds per hour and 40 pounds per day.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information for each day this emissions unit is in operation:
 - a. the company identification for each coating and/or adhesive and photochemically reactive cleanup material employed;
 - b. the number of pounds of each coating and/or adhesive and photochemically reactive cleanup material employed;
 - c. the OC content of each coating and/or adhesive and photochemically reactive cleanup material, in percent by weight or pound per gallon, as employed;
 - d. the total OC emission rate for all coatings/adhesives and photochemically reactive cleanup materials, in pounds per day;
 - e. the total number of hours this emissions unit was in operation; and
 - f. the average hourly OC emission rate for all coatings and/or adhesives and photochemically reactive cleanup materials, i.e., (d)/(e), in pounds per hour (average).

[Note: The coating/adhesive information must be for the coatings/adhesives as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive" is based upon OAC rule 3745-21-01(C)(5).]

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:
 - a. an identification of each day during which the average hourly OC emissions from the coatings/adhesives and photochemically reactive cleanup materials exceeded 8 pounds per hour, and the actual average hourly OC emissions for each such day; and
 - b. an identification of each day during which the OC emissions from the coatings/adhesives and photochemically reactive cleanup materials exceeded 40 pounds per day, and the actual OC emissions for each such day.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
2. Emission Limitations:
OC emissions shall not exceed 8 pounds per hour and 40 pounds per day.

Applicable Compliance Method:

Compliance with these emission limitations may be demonstrated based upon the records required pursuant to section A.III.1. If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25.

3. Formulation data or USEPA Method 24 shall be used to determine the OC contents of the coatings/adhesives and cleanup materials.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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