John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

11/20/2012

Genevieve Damico *Via E-Mail Notification*
United States Environmental Protection Agency
Mail Code: AR-18J
77 West Jackson Blvd.
Chicago, IL 60604-3507

RE: PROPOSED AIR POLLUTION TITLE V PERMIT
Facility Name: GrafTech International Holdings Inc.
Facility ID: 1318281215
Permit Type: Renewal
Permit Number: P0107620

Dear Ms. Damico:

A proposed OAC Chapter 3745-77 Title V permit for the referenced facility has been issued for review by U.S. EPA. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. If U.S. EPA does not object to this proposed permit, the permit will be processed for issuance as a final action not less than 45 days from the date of this letter. Please contact me at (614) 644-3631 by the end of the 45 day review period if you wish to object to the proposed permit.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Cleveland Division of Air Quality

PROPOSED

Division of Air Pollution Control
Title V Permit
for
GrafTech International Holdings Inc.

Facility ID:	1318281215
Permit Number:	P0107620
Permit Type:	Renewal
Issued:	11/20/2012
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Division of Air Pollution Control
Title V Permit
for
GrafTech International Holdings Inc.

Table of Contents

Authorization

Facility ID: 1318281215
Facility Description: carbon and graphite products
Application Number(s): A0027071, A0036079, A0041262
Permit Number: P0107620
Permit Description: Title V renewal permit for emissions units that produce carbon and graphite products. Control devices that are used include baghouses, scrubbers, and recuperative thermal oxidizer (RTO).
Permit Type: Renewal
Issue Date: 11/20/2012
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Superseded Permit Number: P0095491

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

GrafTech International Holdings Inc.
11709 Madison Ave
Lakewood, OH 44107

Ohio Environmental Protection Agency (EPA)District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality
2nd Floor
75 Erieview Plaza
Cleveland, OH 44114
(216)664-2297

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. 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. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Cleveland Division of Air Quality. 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, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(Authority for term: ORC 3704.036(A))

2. 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 C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) 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:

(1) 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 (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) 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))

(2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions 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 (i.e.,

postmarked) 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 deviation reports shall satisfy the requirements 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. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

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 satisfies the reporting requirements specified in this Standard 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 (for the deviations so reported) the requirements 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 Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

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

(3) 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 Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted (i.e., postmarked) 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. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed

adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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 and 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 Standard Term and Condition A.2.c)(2) 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) and OAC rule 3745-77-07(A)(13)(b))

(4) 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))

(5) Reports of any required monitoring and/or record keeping information shall be submitted to Cleveland Division of Air Quality.

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

3. 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 Standard Term and Condition A.2.c)(1) above.

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

4. 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))

5. 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))

6. 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))

7. 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 Standard Term and Condition A.11 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.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. 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))

9. 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))

10. 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 standard terms and conditions shall apply to all operating scenarios authorized in this permit.

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

11. 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))

12. 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))

13. 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:

(1) 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.

(2) 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.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) 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:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) 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:

(1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.

(2) 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.

(3) 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))

14. 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))

15. 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))

16. 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))

17. 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, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). 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))

18. 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.)

19. Insignificant Activities or Emissions Levels

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

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

20. 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))

21. 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))

22. 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 from the responsible official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

After the date on which 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 Title V permit 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.

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

24. Reporting Requirements Related to Monitoring and Record Keeping RequirementsUnder State Law Only

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 (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

25. Records Retention RequirementsUnder State Law Only

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.

26. 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.

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

27. 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).

28. 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.

(Authority for term: OAC rule 3745-77-01(C))

29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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 (i.e., postmarked) 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 Standard Term and Condition A.2.c)(2); or

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; or

c) where the company's responsible official has certified that an emissions unit has been permanently shut down.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

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

   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.

3. Pursuant to 40 CFR Part 64, the permittee has submitted and the Ohio EPA has approved a compliance assurance monitoring (CAM) plan for particulate emissions for emissions units P017, P018, and P038 at this facility. The permittee shall comply with the provisions of the plan during any operation of the aforementioned emissions units.

   [Authority for term: 40 CFR Part 64]

4. Pursuant to 40 CFR Part 64, the permittee has submitted and the Ohio EPA has approved a compliance assurance monitoring (CAM) plan for SO_2 emissions for emissions units P016, P023 through P026, and P034 through P038 at this facility. The permittee shall comply with the provisions of the plan during any operation of the aforementioned emissions units.

   [Authority for term: 40 CFR Part 64]

5. Pursuant to 40 CFR Part 64, the permittee has submitted and the Ohio EPA has approved a compliance assurance monitoring (CAM) plan for CO emissions for emissions units P034 through P038 at this facility. The permittee shall comply with the provisions of the plan during any operation of the aforementioned emissions units.

   [Authority for term: 40 CFR Part 64]

C. Emissions Unit Terms and Conditions

1. P016, Rolling Line 2

Operations, Property and/or Equipment Description:

Grafoil rolling line number 2 with 500 ACFM scrubber

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (Modified PTI 13-02567 issued 5/13/2004)	Carbon monoxide (CO) emissions shall not exceed 18.00 pounds per hour. Nitrogen oxide (NOx) emissions shall not exceed 2.70 pounds per hour. Sulfur dioxide (SO_2) emissions shall not exceed 5.40 pounds per hour. Particulate matter 10 microns (PM_{10}) emissions shall not exceed 1.10 pounds per hour. The visible particulate emissions from any exhaust stack shall not exceed ten per cent (10%) opacity as a six-minute average. Compliance with this rule also includes compliance with OAC rule 3745-31-05(D)(1)(b).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D)(1)(b)	CO emissions shall not exceed 52.56 tons per year (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. SO_2 emissions shall not exceed 15.77 TPY as a rolling, 12-month summation of the SO_2 emissions. PM_{10} emissions shall not exceed 4.82 TPY as a rolling, 12-month summation of the particulate emissions. See b)(2)b. below.
c.	OAC rule 3745-17-07	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11	The particulate emission limitation specified by this rule is equivalent to the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-18-06	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.
f.	40 CFR Part 64 Compliance Assurance Monitoring (CAM) for SO_2 and PM emissions	See c)(3), c)(4), d)(4) and e)(3) below.

(2) Additional Terms and Conditions

a. The BAT determination is a 500 ACFM packed tower scrubber with caustic scrubbing solution to control emissions of particulates (PM_{10}), sulfur dioxide and acidic gases.

b. The emission limitations for CO, NOx and SO_2 emissions are based on the Synthetic Minor Determination to limit the potential to emit for this emissions unit.

c) Operational Restrictions

(1) The permittee shall burn only natural gas in the furnace associated with this emissions unit.

(2) The maximum annual production rate and emission limitations for this emissions unit shall not exceed those specified by the formulas listed below, based upon a rolling 12-month summation.

The permittee shall document the monthly emissions by tracking the monthly graphite flake feed input quantity with the appropriate CO, NOx and SO_2 emission factors, for the existing production scenarios, and those developed for any new production scenarios, to calculate total monthly actual CO, NOx and SO_2 emissions from P016. Any new production scenarios shall require the review and prior approval by the Cleveland Division of Air Quality (Cleveland DAQ)

Production Scenario	Emission Factor (EF)
#1	34.2 pounds CO/ton of graphite
#2	62 pounds CO/ton of graphite
#1 & #2	5.6 pounds NOx/ton of graphite
#1 & #2	0.1 pound SO_2/ton of graphite
#1 & #2	0.33 pound of PE/ton of graphite

CO Emissions:

$$\sum_{i=1}^{y} Si = \text{total tons/month CO}$$

$$\sum_{j=1}^{12} Ej \leq 52.56 \text{ tons of CO per rolling 12-month period}$$

Where:

S = (pounds CO/ton EF) x (tons/month graphite flake fed) x (1 ton/2000 pounds)

y = number of graphite flake feed scenarios

E = tons/month CO

NOx Emissions

(5.6 pounds NOx/ton) x (tons/month graphite flake fed) x (1 ton/2000 pounds)= tons/month NOx

12

Σ Ek≤ 8.15 tons of NOx per rolling 12-month period

k=1

Where:

E = tons/month NOx

SO_2 Emissions:

(0.1 pound SO_2/ton) x (tons/month graphite flake fed) x (1 ton/2000 pounds)= tons/month SO_2

12

Σ Em≤ 15.77 tons of SO_2 per rolling 12-month period

m=1

Where:

E=tons/month SO_2

Particulate Emissions:

(0.33 pound PE/ton) x (tons/month graphite flake fed) x (1 ton/2000 pounds) = tons/month PE

12

Σ En ≤ 4.82 tons of PE per rolling 12-month period

n=1

Where:

E=tons/month PE

[Authority for term: OAC rule 3745-77-10(A) and PTI # 13-02567]

(3) During normal operation, the pressure drop across the dust collector shall be within the manufacturer's specified range. The pH of the caustic scrubbing solution shall be maintained at 7.5 or greater and the scrubber recirculation rate shall be maintained at 12 gallons per minute (gpm) or greater. The pH and recirculation rate for the scrubber control system shall be monitored and recorded in 1-hour blocks of time (for a total of 24 blocks per day) while the emissions units is in operation. The pH control system shall be calibrated weekly.

[Authority for term: OAC rule 3745-77-10(A), 40 CFR Part 64, and PTI # 13-02567]

(4) A scrubbing solution recirculation flow rate to the scrubber of not less 12 gallons scrubbing solution/minute shall be maintained and monitored by a flow switch located in the discharge line of the recirculation pump. The actuation of this flow switch at 12 gallons scrubbing solution/minute will be checked semi-annually.

[Authority for term: OAC rule 3745-77-10(A), 40 CFR Part 64 and PTI # 13-02567]

d) Monitoring and/or Recordkeeping Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall calibrate, operate, and maintain, in good working condition, systems of monitors, in accordance with the manufacturers' recommendations, with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The permittee shall record on an hourly basis the following parameters whenever graphite is fed into the graphite rolling line process:

a. the pH levels of the caustic scrubbing solution; and

b. the scrubbing solution recirculation flow switch position (i.e., the switch is either "made" or "not made." "Made" means the scrubbing solution is flowing) located in the recirculation pump discharge piping.

The unit for scrubbing solution recirculation rate is gallons per minute. The monitors shall be calibrated, operated and maintained in accordance with the manufacturers' recommendations, with any modifications deemed necessary by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

(3) The permittee shall maintain monthly records of the graphite flake feed rate and all other information as required under c)(2), to determine compliance on a rolling 12-month basis.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

(4) The CAM plan for this emissions unit has been developed for SO_2 and PM emissions.

The CAM performance indicator for the dust collector is pressure drop.

The CAM performance indicators for the wet scrubber (single-stage) are pH and recirculation flow rate of the caustic scrubbing solution.

The CAM performance indicator range as measured by the dust collector pressure drop, caustic scrubber's pH, and recirculation flow rate is specified in c)(3). When the pressure drop, pH, and recirculation flow rate are outside of the indicator range specified in c)(3), corrective action (including, but not limited to, an evaluation of the emissions unit and the control device) will be required.

Upon detecting an excursion of the sulfur dioxide emission indicator ranges listed above, the owner or operator shall restore operation of the emissions unit (including the control devices) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion. Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range.

If a determination is made by the Administrator or Ohio EPA that the permittee has not used acceptable procedures in response to an excursion or exceedance based on the results of a determination made under 40 CFR Part 64.7(d)(2), the permittee may be required to develop a Quality Improvement Plan (QIP) consistent with the requirements of 40 CFR Part 64.8.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

e) 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.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly written reports which identify all deviations (excursions), exceedance(s) and non-compliance periods of time of the following unless specified otherwise below:

a. the rolling, 12-month limitations on the carbon monoxide, nitrogen oxide, and sulfur dioxide emissions;

b. all pH readings of the caustic scrubbing solution less than 7.5; and

c. any time period the scrubbing solution recirculation flow switch was "not made" (i.e., scrubbing solution was not flowing) when the emissions unit was in operation.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland DAQ. If reports or documented material(s) contain confidential information, submit a sanitized version for public record along with the required reports.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

(3) If the results of monitoring or record keeping data indicate that the SO_2 and/or PM emission limitations may have been exceeded, the permittee shall submit the results of that data, and document any corrective action taken to restore operation of the emissions unit, or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The reports shall be submitted in accordance with Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

CO emissions shall not exceed 18.0 pounds per hour.

Applicable Compliance Methods:

Methods 1 to 4 and 10 or 10B of 40 CFR Part 60, Appendix A. If applicable, alternative U.S. EPA test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

b. Emission Limitation:

CO emissions shall not exceed 52.56 TPY.

Applicable Compliance Methods:

Calculation of the monthly and rolling 12-month emissions using records of restricted amount of material processed and emission factors using the equations as follows:

CO Emissions:

y

Σ Si = total tons/month CO

i=1

12

Σ Ej≤ 52.56 tons of CO per rolling 12-month period

j=1

Where:

S = (pounds CO/ton EF) x (tons/month graphite flake fed) x (1 ton/2000 pounds)

y = number of graphite flake feed scenarios

E = tons/month CO

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

c. Emission Limitation:

NOx emissions shall not exceed 2.79 pounds per hour.

Applicable Compliance Methods:

Methods 1 to 4 and 7E of 40 CFR Part 60, Appendix A. If applicable, alternative U.S. EPA test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

d. Emission Limitation:

NOx emissions shall not exceed 8.15 TPY.

Applicable Compliance Methods:

Calculation of the monthly and rolling 12-month emissions using records of restricted amount of material processed and emission factors using the equations as follows:

NOx Emissions:

(5.6 pounds NOx/ton graphite) x (ton/month graphite flake fed) x (1 ton/2000 pounds) = tons/month, NOx

12

$\Sigma Ek \leq$ 8.15 tons NOx emissions per rolling 12-month period

k=1

Where:

E = tons/month, NOx

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

e. Emission Limitation:

SO_2 emissions shall not exceed 5.40 pounds per hour.

Applicable Compliance Methods:

The following test methods shall be employed to determine the control efficiency of the SO_2 emission control equipment (i.e., the percent of reduction in mass emissions between the inlet and the outlet of the emission control equipment) serving this emissions unit:

OAC rule 3745-18-04 (A) using the Methods 1 to 4 and 6C of 40 CFR Part 60, Appendix A. If applicable, alternative U.S. EPA test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

f. Emission Limitation:

SO_2 emissions shall not exceed 15.77 TPY.

Applicable Compliance Method:

Calculation of the monthly and rolling, 12-month emissions using records of restricted amount of material processed and emission factors using the equations as follows:

SO_2 Emissions:

(0.1 pound SO_2/ton graphite) x (ton/month graphite flake fed) x (1 ton/2000 pounds) = tons/month, SO_2

12

$\Sigma Em \leq$ 15.77 tons SO_2 emissions per rolling 12-month period

m=1

Where:

E = tons/month, SO_2

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

g. Emission Limitation:

PE shall not exceed 1.10 pounds per hour.

Applicable Compliance Methods:

OAC rule 3745-17-03 (B) (10) using the Methods 1 to 5 of 40 CFR Part 60, Appendix A.

If applicable, alternative U.S. EPA test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

h. Emission Limitation:

4.82 PE tons/year

Applicable Compliance Method:

Calculation of the monthly and rolling 12-month emissions using records of restricted amount of material processed and emission factors using the equations as follows:

Particulate Emissions:

(0.33 pound PE/ton) x (tons/month graphite flake fed) x (1 ton/2000 pounds) = tons/month PE

12

Σ En $\leq$ 4.82 tons of PE per rolling 12-month period

n=1

Where:

E=tons/month PE

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI # 13-02567]

i. Applicable Compliance Method:

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.

g) Miscellaneous Requirements

(1) Emissions unit P016 (scrubber exhaust stack) was most recently performance tested on 5/13/2009 by Air Compliance Testing, Inc. (Job Number: 090505). Emission rates were determined to be the following:

a. Total front-half particulate matter – 0.0162 lb/hr

b. Sulfur dioxide – 0.0192 lb/hr

c. Nitrogen oxide (as NO_2) – 1.57 lbs/hr

d. Carbon monoxide – 5.39 lb/hr

2. P018, East Treatment System

Operations, Property and/or Equipment Description:

East Treatment System

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (Modified PTI 13-03054 issued 5/13/2003) (Modified PTI P0110951 issued 9/ 4/2012)	Particulate matter (PM) emissions shall not exceed 0.26 pound per hour and 1.14 tons per year (TPY) Nitrogen oxide (NOx) emissions shall not exceed 3.57 pounds per hour and 15.64 TPY. Sulfur dioxide (SO_2) emissions shall not exceed 0.51 pound per hour and 2.23 TPY. Carbon monoxide (CO) emissions shall not exceed 17.86 pounds per hour and 78.23 TPY. Volatile Organic Compounds (VOC) emissions shall not exceed 0.70 pound per hour and 3.07 TPY. Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.
b.	OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-18-06(E)	The SO_2 emission limitation specified by this rule is less stringent than the SO_2 emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	40 CFR Part 64 Compliance Assurance Monitoring (CAM) for PM emissions	See c)(8), c)(9), d)(8), and e)(3) below.

(2) Additional Terms and Conditions

a. The BAT determined for this source consists of 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 will be controlled by a 12,500 ACFM wet scrubber with alkaline sodium hydrosulfide solution with an emission scrubbing control efficiency of 65% by weight.

c) Operational Restrictions

(1) The pressure drop across the cartridge filter dust collector shall be maintained at a minimum of 0.25 inch of water column while the emissions unit is in operation (when flake is being fed into the material treatment system). This parameter data shall 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).

[Authority for term: OAC rule 3745-77-10(A) and PTI P0110951]

(2) The permittee shall operate the wet scrubber system at all times in accordance with the following parameters when graphite material is being treated:

a. the pH control systems shall be calibrated weekly and the ORP control systems shall be verified weekly;

b. the scrubbing solution recirculation flow rate to each of the three stages shall not be less than 100 gallons of scrubbing solution per minute (as verified by the

record keeping in d)(1)) when flake is being fed into the material treatment system. This parameter shall be maintained and monitored by pressure or flow switches located in the discharge line of each recirculation pump. The actuation of this pressure/flow switch at 100 gallons per minute will be checked semiannually;

c. a total pressure drop across the scrubber system (i.e., all 3 stages) of not less than 1.0 inch water column as measured by Magnehelic or equivalent differential pressure gauge(s) (when flake is being fed into the material treatment system). This parameter data shall 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); and,

d. the oxidation reduction potential (ORP) of the alkaline sodium hydrosulfide scrubbing solution shall be maintained as defined in c)(5), c)(6), and c)(7).

[Authority for term: OAC rule 3745-77-10(A) and PTI P0110951]

(3) The permittee shall burn only natural gas in this emissions unit.

[Authority for term: OAC rule 3745-77-10(A) and PTI P0110951]

(4) The three-stage wet scrubber will be operated under either Process Operating Scenario #1, Process Operating Scenario #2, or Process Operating Scenario #3 described below.

[Authority for term: OAC rule 3745-77-10(A) and PTI P0110951]

(5) For Process Operating Scenario #1, the following operating configuration of the three-stage scrubbing system will be required when the emissions unit is in operation (when flake is being fed into the material treatment system):

a. Stage 1 shall 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 9.0 or greater. The ORP of Stage 1 scrubbing solution shall be maintained at negative 355or less (i.e., can be more negative). This parameter data shalll 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 shall be operated using a scrubbing solution of sodium hydroxide only. The pH of the scrubbing solution in Stage 2 shall be maintained at 8.0 or greater. The ORP of Stage 2 scrubbing solution is not regulated. This parameter data shall be averaged in 1-hour blocks of time (for a total of 24 blocks per day).

c. Stage 3 shall 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 9.0 or greater. The ORP of Stage 3 scrubbing solution shall be maintained at negative 275 or less (i.e., can be more negative). This parameter data shall be averaged in 1-hour blocks of time (for a total of 24 blocks per day).

[Authority for term: OAC rule 3745-77-10(A) and PTI P0110951]

(6) For Process Operating Scenario #2, the following operating configuration of the three-stage scrubbing system shall be required when the emissions unit is in operation (when flake is being fed into the material treatment system):

a. Stage 1 shall 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 9.0 or greater. The ORP of Stage 1 scrubbing solution shall be maintained at negative 395 or less (i.e., can be more negative). This parameter data shall be averaged in 1-hour blocks of time (for a total of 24 blocks per day).

b. Stage 2 shall 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 less than 9.0. The ORP of Stage 2 scrubbing solution shall be maintained at positive 300 or greater (i.e., can be more positive). This parameter data shall be averaged in 1-hour blocks of time (for a total of 24 blocks per day).

c. Stage 3 shall 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 9.0 or greater. The ORP of Stage 3 scrubbing solution shall be maintained at negative 335 or less (i.e., can be more negative). This parameter data shall be averaged in 1-hour blocks of time (for a total of 24 blocks per day).

[Authority for term: OAC rule 3745-77-10(A) and PTI P0110951]

(7) For Process Operating Scenario #3, the following operating configuration of the 3-stage scrubbing system shall be required when the emissions unit is in operation (i.e., when flake is being fed into the material treatment system):

a. Stage 1 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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).

[Authority for term: OAC rule 3745-77-10(A) and PTI P0110951]

(8) The static pressure drop for the dust collector system shall be monitored and recorded in 1-hour blocks of time (for a total of 24 blocks per day) while this emissions unit is in operation.

[Authority for term: OAC rule 3745-77-10(A), 40 CFR Part 64, and PTI P0110951]

(9) The pH, static pressure drop, and ORP for the scrubber control system shall be monitored and recorded in 1-hour blocks of time (for a total of 24 blocks per day) while this emissions unit is in operation.

[Authority for term: OAC rule 3745-77-10(A), 40 CFR Part 64, and PTI P0110951]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall calibrate, operate, and maintain, in good working condition, systems of monitors, in accordance with the manufacturers' recommendations, with any modifications deemed necessary by the permittee and approved by the Cleveland Division of Air Quality (Cleveland DAQ). The monitoring devices shall be capable of accurately measuring the desired parameters.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

(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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

(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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

(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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

(5) The permittee shall record the amount of graphite flake fed into the emissions units, in tons, on a monthly basis.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

(6) The permittee shall collect and record the following information, in averaged 1-hr 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, and 3;

c. the total pressure drop readings across the three stages of the scrubber system;

d. the scrubbing solution recirculation pressure/flow switch position (i.e., the switch is either "made" or "not made" on Stages 1, 2, and 3. "Made" means the scrubbing solution is flowing); and

e. the pressure drop readings across the cartridge filter dust collector.

Due to the automated process control loop of this system, any parameter deviations less than 5 minutes will be considered normal operating conditions and is not recorded as a deviation.

The unit for ORP is either negative or positive millivolts. The unit for pressure drop is inches of water column. The unit for operation of the pressure/flow switches for the scrubbing solution will be recorded as "made" or "not made" ("made" indicates that there is pressure/flow; "not made" indicates that there is no pressure/flow).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

(7) The permittee shall maintain records of the calibrations and verifications for the ORP and pH control systems associated with this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

(8) The CAM plan for this emissions unit has been developed for PM emissions. The CAM performance indicators are as specified in the following tables:

a. for the cartridge filter dust collector - pressure drop:

Pressure Drop (inches of water column)	0.25+

b. for the wet scrubber system (3-stage) - scrubber solution pH, scrubber solution recirculation rate (in GPM), pressure drop, and ORP measured in millivolts:

pH	Scrubber Solution Recirculation (GPM)	Pressure Drop (inches of water column)	ORP (mV)
Scenario 1: Stage 1 9.0+ Stage 2 8.0+ Stage 3 9.0+ Scenario 2: Stage 1 9.0+ Stage 2 9.0 or < Stage 3 9.0+ Scenario 3: Stage 1 9.0+ Stage 2 8.0+ Stage 3 9.0+	100+	1+	Scenario 1: Stage 1 -355 or < Stage 3 -275 or < Scenario 2: Stage 1 -395 or < Stage 2 +300 or + Stage 3 -335 or < Scenario 3: Stage 1 -80 or < Stage 3 -80 or <

The CAM performance indicator range as measured by pressure drop is specified in c)(1) and d)(8)a.. When the pressure drops are outside of the indicator range specified in c)(1), corrective action (including, but not limited to, an evaluation of the emissions unit and the control device) will be required.

The CAM performance indicator range as measured by scrubber solution pH, scrubber solution recirculation rate (in GPM), pressure drop, and ORP measured in millivolts is specified in c)(5), c)(6), and c)(7) and d)(8)b.. When the pH, scrubber solution recirculation rate, pressure drop, and ORP are outside of the indicator range specified in c)(5), c)(6), and c)(7), corrective action (including, but not limited to, an evaluation of the emissions unit and the control device) will be required.

Upon detecting an excursion of any of the particulate and/or sulfur dioxide emission indicator ranges listed above, the owner or operator shall restore operation of the emissions unit (including the control devices) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion. Such actions

may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range.

If a determination is made by the Administrator or Ohio EPA that the permittee has not used acceptable procedures in response to an excursion or exceedance based on the results of a determination made under 40 CFR Part 64.7(d)(2), the permittee may be required to develop a Quality Improvement Plan (QIP) consistent with the requirements of 40 CFR Part 64.8.

[Authority for term: OAC rule 3745-77-07(C)(1) , 40 CFR Part 64, and PTI P0110951]

e) Reporting Requirements

(1) The permittee shall submit quarterly written reports to the Cleveland DAQ that identify all deviations (excursions), exceedance(s) and non-compliance periods of time for the following:

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;

f. all ORP readings of Stage 3 scrubbing solution greater than negative 275 (more positive than -275) when in Process Operating Scenario #1, and 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 the three 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* wherethe recirculation pressure/flow switch was "not made" in Stages 1, 2, or 3 (i.e., the scrubbing solution was flowing less than 100 gallons per minute).

*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 Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

(2) 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 DAQ within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

(3) If the results of monitoring or record keeping data indicate that the PM emission limitations may have been exceeded, the permittee shall submit the results of that data, and document any corrective action taken to restore operation of the emissions unit, or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The reports shall be submitted in accordance with Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) , 40 CFR Part 64, and PTI P0110951]

(4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall not exceed 0.26 pound per hour and 1.14 TPY.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in f)(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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

b. Emission Limitation:

NOx emissions shall not exceed 3.57 pounds per hour and 15.64 TPY.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in f)(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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

c. Emission Limitation:

SO_2 emissions shall not exceed 0.51 pound per hour and 2.23 TPY.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in f)(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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

d. Emission Limitation:

CO emissions shall not exceed 17.86 pounds per hour and 78.23 TPY.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in f)(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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

e. Emission Limitation:

VOC emissions shall not exceed 0.70 pound per hour and 3.07 TPY.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based upon the results of the emission testing specified in f)(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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0110951]

f. Emission Limitation:

Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the above emission limitation shall be determined through visible particulate emission observations performed in accordance with 40 CFR, Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 374-17-03(B)(1).

[Authority for term: OAC rules 3745-17-03(B)(1), 3745-77-07(C)(1), and PTI P0110951]

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months prior to this permit's expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for PE, SO_2, NOx, CO, and VOC in the appropriate averaging period(s).

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 through 4 of 40 CFR Part 60, Appendix A;

Method 5 of 40 CFR Part 60, Appendix A for particulates;

Method 6 of 40 CFR Part 60, Appendix A for SO_2;

Method 7E of 40 CFR Part 60, Appendix A for NOx;

Method 10 of 40 CFR Part 60, Appendix A for CO; and

Method 25 or 25A 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.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Cleveland DAQ. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to 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).

f. 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.

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

[Authority for term: OAC rule 3745-77-07(C)(1)] and PTI P0110951]

g) Miscellaneous Requirements

(1) Emissions unit P018 (scrubber exhaust stack) was most recently performance tested on 5/14/2009 by Air Compliance Testing, Inc. (Job Number: 090505). Emission rates were determined to be the following:

a. Filterable particulate matter – 0.197 lb/hr

b. Sulfur dioxide – 0.202 lb/hr

c. Nitrogen oxide (as NO_2) – 0.88 lbs/hr

d. Carbon monoxide – 0.24 lb/hr

3. P030, Hand Gluing

Operations, Property and/or Equipment Description:

Hand gluing of miscellaneous graphite sheets/shapes.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-07(M)(3)	See b)(2)a. below.

(2) Additional Terms and Conditions

a. The requirements of this rule do not apply to this emissions unit because this unit does not employ a control device or an oven for baking, curing or heat polymerization.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information for each month this emissions unit is in operation:

a. the company identification for each coating and/or adhesive cleanup and cleanup material employed;

b. the number of pounds of each coating and/or adhesive and cleanup material employed;

c. the OC content of each coating and/or adhesive and cleanup material, in percent by weight, as employed; and

d. the total OC emission rate for all coatings/adhesives and cleanup materials, in pounds per month (summation of b. x c. for all coatings/adhesives and cleanup employed).

e) Reporting Requirements

(1) The permittee shall submit annual reports to the Cleveland Division of Air Quality (Cleveland DAQ) that specify the total OC 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.

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) This emission unit was installed 6/1/1969.

(2) A PTI has never been issued for this emission unit.

4. P032, Coating Line #1

Operations, Property and/or Equipment Description:

Coating line No. 1 (coating of graphite rolls) with oven and controlled by a dust collector.

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

(1) d)(2) through d)(4)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 13-04525 issued 4/28/2005)	Organic compound (OC) emissions shall not exceed 7.30 tons per year (TPY). Particulate emissions shall not exceed 0.01 pound per hour and 0.04 TPY.
b.	OAC rule 3745-17-11(A)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-114-01	See d)(2) through (4)

(2) Additional Terms and Conditions

a. The hourly and annual allowable emission limit for particulate matter emissions has been set at the emission unit's potential to emit (PTE). Therefore, no record keeping or reporting is required for this limitation. Although particulate matter emissions are captured by a dust collector venting inside the building, no monitoring requirements are necessary, as the uncontrolled emissions meet the "de minimis" criteria.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information for each day for this emissions unit is in operation:

a. the company identification for each coating, adhesive, and cleanup material employed;

b. the number of pounds and/or gallons of each coating, adhesive, and cleanup material employed;

c. the OC content of each coating, adhesive, and cleanup material, in percent weight and/or pounds per gallon; and

d. the total OC emission rate for all coatings, adhesives, and cleanup material, in pounds per day [sum of b x c].

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04525]

(2) The permit to install for this emissions unit P032 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC) calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

a. Pollutant: Methyl Ethyl ketone (MEK)

TLV (mg/m3): 589,775

Maximum Hourly Emission Rate (lbs/hr): 0.61

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 363.5

MAGLC (µ/m3): 14,042

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04525]

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

the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04525]

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

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

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

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04525]

e) Reporting Requirements

(1) The permittee shall submit annual reports to the Cleveland Division of Air Quality (Cleveland DAQ) that specify the total OC 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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI#13-04525]

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

OC emissions shall not exceed 7.30 TPY.

Applicable Compliance Method:

Compliance with the emission limitation shall be demonstrated based upon the records required pursuant to d)(1) by summing the daily emissions for each calendar year and divide by 2,000 lbs/ton.

b. Emission Limitations:

PE shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

If required, compliance with the lb/hr emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03 (B)(10).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04525]

c. Emissions Limitations:

PE shall not exceed 0.04 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04525]

(2) Formulation data or U.S. EPA Method 24 (40 CFR Part 60, Appendix A) shall be used to determine the OC content of the coatings, adhesives, and cleanup materials. The Cleveland DAQ may require that U.S. EPA Method 24 be used to determine the OC content of the coatings. If an owner or operator determines that Method 24 cannot be used for a particular coating, adhesive, or cleanup material, the permittee shall so notify the administrator of the U.S. EPA and shall use formulation data for that coating, adhesive, or cleanup material to demonstrate compliance until the U.S. EPA provides alternative analytical procedures or alternative precision statements for Method 24.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04525]

g) Miscellaneous Requirements

(1) None.

5. P033, Coating Line #2

Operations, Property and/or Equipment Description:

Automated coating line number 2 with oven and <4,000 ACFM dust collector

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

(1) d)(2) through d)(4)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-04639 issued final 6/29/2006.	Organic compounds (OC) emissions shall not exceed 7.30 tons per year (TPY). Particulate emissions (PE) shall not exceed 0.01 pound per hour and 0.04 TPY.
b.	OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-114-01	See d)(2) through (4)

(2) Additional Terms and Conditions

a. The hourly and annual allowable emission limit for particulate matter emissions has been set at the emission unit's potential to emit (PTE). Therefore, no record keeping or reporting is required for this limitation. Although particulate matter emissions are captured by a dust collector venting inside the building, no monitoring requirements are necessary, as the uncontrolled emissions meet the "de minimis" criteria.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information for each day for this emissions unit is in operation:

a. the company identification for each coating, adhesive, and cleanup material employed;

b. the number of pounds and/or gallons of each coating, adhesive, and cleanup material employed;

c. the OC content of each coating, adhesive, and cleanup material, in percent weight and/or pounds per gallon; and

d. the total OC emission rate for all coatings, adhesives, and cleanup material, in pounds per day [sum of b x c].

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04639]

(2) The permit to install for this emissions unit P033 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

a. Pollutant: Methyl ethyl ketone (MEK) [78-93-3]

TLV (mg/m3): 651.996

Maximum Hourly Emission Rate (lbs/hr): 0.6151

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 360.9

MAGLC (µ/m3): 14,042

b. Pollutant: 2-Butoxyethanol (EGBE) [111-76-2]

TLV (mg/m3): 96.662

Maximum Hourly Emission Rate (lbs/hr): 1.0563

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 619.9

MAGLC (µg/m3): 2,301.5

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04639]

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

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04639]

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

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

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

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04639]

e) Reporting Requirements

(1) The permittee shall submit annual reports to the Cleveland Division of Air Quality (Cleveland DAQ) that specify the total OC 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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04639]

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

OC emissions shall not exceed 7.30 TPY.

Applicable Compliance Method:

Compliance with the emission limitation may be demonstrated based upon the records required pursuant to d)(1) by summing the daily emissions for each calendar year and divide by 2,000 lbs/ton..

b. Emission Limitations:

PE shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

If required, compliance with the lb/hr emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-10 (B)(10).

[Authority for term: OAC rules 3745-17-10(B)(10), 3745-77-07(C)(1), and PTI 13-04639

c. Emissions Limitations:

PE shall not exceed 0.04 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

[Authority for term: OAC rule 3745-77-07(C)(1), and PTI 13-04639]

(2) Formulation data or U.S. EPA Method 24 (40 CFR Part 60, Appendix A) shall be used to determine the OC content of the coatings, adhesives, and cleanup materials. The Cleveland DAQ may require that U.S. EPA Method 24 be used to determine the OC content of the coatings. If an owner or operator determines that Method 24 cannot be used for a particular coating, adhesive, or cleanup material, the permittee shall so notify the administrator of the U.S. EPA and shall use formulation data for that coating, adhesive, or cleanup material to demonstrate compliance until the U.S. EPA provides alternative analytical procedures or alternative precision statements for Method 24.

[Authority for term: OAC rule 3745-77-07(C)(1), and PTI 13-04639]

g) Miscellaneous Requirements

(1) None.

6. P038, West Treatment System

Operations, Property and/or Equipment Description:

West Treatment System

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 PTI P0107566 issued 4/27/2011	Particulate matter (10 microns or less) (PM_{10}) shall not exceed 0.24 pound per hour and 1.03 ton per year (TPY). Nitrogen oxide (NOx) emissions shall not exceed 0.82 pound per hour and 3.61 TPY. Sulfur dioxide (SO_2) emissions shall not exceed 0.24 pound per hour and 1.06 TPY. Volatile organic compound (VOC) emissions shall not exceed 0.87 pound per hour and 3.81 TPY. Visible particulate emissions from the stack serving this emissions unit shall not exceed 10 percent opacity, as a six-minute average. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A), OAC rule 3745-17-11(B), and OAC rule 3745-18-06(E). See b)(2)a. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)b. below.
c.	OAC rule 3745-31-05(F)	See b)(2)c. below.
d.	ORC 3704.03(T)	The requirements of this rule are equivalent to the BACT requirements of OAC rule 3745-31-10 through 20 for CO.
e.	OAC rule 3745-31-10 through 20	Carbon Monoxide (CO) emissions shall not exceed 19.40 pounds per hour and 84.95 TPY.
f.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule. See b)(2)d. below.
g.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 6.07 pounds per hour. See b)(2)d. below.
h.	OAC rule 3745-18-06(E)	Sulfur dioxide emissions shall not exceed 29.65 pounds per hour. See b)(2)d. below.
e.	40 CFR Part 64 Compliance Assurance Monitoring (CAM) for PM, and SO_2 emissions	See c)(3), c)(4), c)(5), d)(6), and e)(3) below.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by 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 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the SO_2 and VOC emissions from this air contaminant source since the uncontrolled potential to emit for SO_2 and VOC is each less than 10 tons/year.

c. Permit to Install P0107566 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment), as proposed by the permittee, for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A(3) for NOx and particulate emissions:

i. Three stage wet scrubber (65% control efficiency) to control nitrogen oxide emissions;

ii. 500 ACFM bin vent dust collector filter (airveyor); and

iii. 5,000 ACFM graphite flake conveyor dust collector filter.

d. Until such time the U.S. EPA approves the revision to OAC rule 3745-31-05, the more stringent or equivalent visible emissions, particulate emissions, and sulfur dioxide limits established under OAC rule 3745-31-05(A)(3) shall apply. Upon U.S. EPA approval of the revisions to OAC rule 3745-31-05, the rule based limits under OAC rule 3745-17-07(A), 3745-17-11(B), and 3745-18-06(E) shall go into effect.

c) Operational Restrictions

(1) The permittee shall operate the three stage wet scrubber in the Normal or Alternate Operation configuration.

a. For Process Operating Scenarios A or B, i.e. Normal Operation, the following operating configuration of the three stage scrubbing system will be required:

i. Stage #1 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide.

ii. Stage #2 will be operated using a scrubbing solution of sodium hydroxide only.

iii. Stage #3 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide.

b. For Process Operating Scenario C, i.e. Alternate Operation, the following operating configuration of the three stage scrubbing system will be required:

i. Stage #1 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide.

ii. Stage #2 will be operated using a scrubbing solution of sodium hydroxide and sodium chlorite.

iii. Stage #3 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide.

[Authority for term: OAC rule 3745-77-10(A) and PTI P0107566]

(2) The permittee shall burn only natural gas in this emissions unit.

[Authority for term: OAC rule 3745-77-10(A) and PTI P0107566]

(3) The pH, static pressure drop, and liquid flow rate for the scrubber control system shall be monitored and recorded in 1-hour blocks of time (for a total of 24 blocks per day) while this emissions unit is in operation.

[Authority for term: OAC rule 3745-77-10(A) and 40 CFR Part 64]

(4) The permittee shall maintain the pressure drop across the dust collector at the value or within the range determined to be acceptable through performance testing in which compliance with the emissions limitations in b)(1) has been demonstrated.

[Authority for term: OAC rule 3745-77-10(A) and 40 CFR Part 64]

(5) The permittee shall maintain the scrubber solution pH, scrubber liquid flow rate (in GPM), and pressure drop at the values or within the range(s) determined to be acceptable through performance testing in which compliance with the emissions limitations in b)(1) has been demonstrated.

[Authority for term: OAC rule 3745-77-10(A) and 40 CFR Part 64]

d) Monitoring and/or Recordkeeping Requirements

(1) The acceptable range for the pressure drop across the bag-house shall be based upon the manufacturer's specifications, until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(2) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the bag-house when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the bag-house on a daily basis. 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 acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the bag-house is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (Cleveland DAQ). The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the

allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range or limit for the pressure drop across the scrubber, the liquid flow rate, and the liquid pH shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(4) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge), the scrubber liquid flow rate (in gallons per minute), and the scrubber liquid pH during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubber and the scrubber liquids pH and flow rate on daily basis. 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 acceptable liquid flow rate and the liquid pH shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date the corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop, flow rate, and pH readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These range(s) and/or limit(s) for the pressure drop, liquid flow rate, and pH are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted range or limit for the pressure drop, liquid flow rate, or pH based upon information obtained during future performance tests that demonstrate compliance with the allowable SO_2 and NOx emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(5) 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.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(6) The CAM plan performance indicators for this emissions unit will be developed for PM, and SO_2 upon completion of initial performance testing of this emissions unit.

The CAM performance indicator for particulate emissions is the pressure drop for the dust collector as specified in the following table:

Pressure Drop (inches of water column)	TBD

The CAM performance indicator for sulfur dioxide emissions is the scrubber solution pH, scrubber liquid flow rate (in GPM), and pressure drop measured in millivolts as specified in the following table:

pH	Scrubber Liquid Flow Rate (GPM)	Pressure Drop (inches of water column)
TBD	TBD	TBD

The CAM performance indicator range as measured by pressure drop will be specified in c)(4) upon completion of initial performance testing of this emissions unit. When the pressure drops are outside of the indicator range specified in d)(6), corrective action (including, but not limited to, an evaluation of the emissions unit and the control device) will be required.

The CAM performance indicator range as measured by scrubber solution pH, scrubber liquid flow rate (in GPM), and pressure drop will be specified in c)(5) upon completion of initial performance testing of this emissions unit.. When the pH, scrubber liquid flow rate, and pressure drop are outside of the indicator range specified in d)(6), corrective action (including, but not limited to, an evaluation of the emissions unit and the control device) will be required.

Upon detecting an excursion of any of the particulate and/or sulfur dioxide emission indicator ranges listed above, the owner or operator shall restore operation of the emissions unit (including the control devices) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion. Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range.

If a determination is made by the Administrator or Ohio EPA that the permittee has not used acceptable procedures in response to an excursion or exceedance based on the results of a determination made under 40 CFR Part 64.7(d)(2), the permittee may be required to develop a Quality Improvement Plan (QIP) consistent with the requirements of 40 CFR Part 64.8.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. For the baghouse:

i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the bag-house;

iii. each incident of deviation described in "i" (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in "i" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

v. each incident of deviation described in "i" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

b. For the wet scrubber:

i. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber, the liquid flow rate, or the liquid pH was outside of the appropriate range or limit specified by the manufacturer and outside of the acceptable range for each parameter following any required compliance demonstration;

ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;

iii. each incident of deviation described in "i" or "ii" (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in "i" or "ii" where prompt corrective action, that would bring the pressure drop, liquid flow rate, or scrubber liquid pH into compliance with the acceptable range, was determined to be necessary and was not taken; and

v. each incident of deviation described in "i" or "ii" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(2) 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 within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(3) If the results of monitoring or record keeping data indicate that the PM, and SO_2 emission limitations may have been exceeded, the permittee shall submit the results of that data, and document any corrective action taken to restore operation of the emissions unit, or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The reports shall be submitted in accordance with Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

PM_{10} emissions shall not exceed 0.24 pound per hour.

NOx emissions shall not exceed 0.82 pound per hour.

SO_2 emissions shall not exceed 0.24 pound per hour.

VOC emissions shall not exceed 0.87 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitations shall be determined by multiplying the tons of material processed per hour by the emission factor (lb pollutant/ton of material processed) taken from the results of the most recently conducted stack test. Until such time stack testing has been conducted for the West Treatment System, the most recent stack test results (test No.050415 conducted 6/9/2005) from the East Treatment System may be used.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

b. Emission Limitation:

PM_{10} emissions shall not exceed 1.03 TPY.

NOx emissions shall not exceed 3.61 TPY.

SO_2 emissions shall not exceed 1.06 TPY.

VOC emissions shall not exceed 3.81 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the pound per hour allowable for each pollutant by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour limitation, compliance with the annual emission limitation shall also be demonstrated.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

c. Emission Limitation:

CO emissions shall not exceed 19.40 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined using U.S. EPA Methods 1-4 and 10 in accordance with 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

d. Emission Limitation:

CO emissions shall not exceed 84.95 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the pound per hour

allowable by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour limitation, compliance with the annual emission limitation shall also be demonstrated.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

e. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 10 percent opacity or 20 percent opacity (as applicable) as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

No visible emission observations are specifically required to demonstrate compliance with these emission limitations but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

f. Emission Limitation:

Particulate emissions shall not exceed 6.07 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be determined using U.S. EPA Methods 1-5 in accordance with 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

g. Emission Limitation:

Sulfur dioxide emissions shall not exceed 29.65 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be determined using U.S. EPA Methods 1-4 and 6 in accordance with 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months prior to the permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for CO, in the appropriate averaging period(s).

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Method 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.

d. 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 Division of Air Quality (Cleveland DAQ).

e. 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).

f. 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.

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

g) Miscellaneous Requirements

(1) None.

7. Emissions Unit Group -Graphite Furnaces 1 through 12: P039, P040, P041, P042, P043, P044, P045, P046, P047, P048, P049, P050,

EU ID	Operations, Property and/or Equipment Description
P039	Graphite Furnace
P040	Graphite Furnace
P041	Graphite Furnace
P042	Graphite Furnace
P043	Graphite Furnace
P044	Graphite Furnace
P045	Graphite Furnace
P046	Graphite Furnace
P047	Graphite Furnace
P048	Graphite Furnace
P049	Graphite Furnace
P050	Graphite Furnace

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 PTI P0107566 issued 4/27/2011	Carbon monoxide (CO) emissions shall not exceed 218.22 pounds per batch and 4.81 tons per year (TPY). Visible particulate emissions from the stack serving this emissions unit shall not exceed 10 percent opacity as a six-minute average. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). See b)(2)a. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)b. below.
c.	OAC rule 3745-31-10 through 20	Carbon monoxide (CO) emissions shall not exceed 218.22 pounds per batch and 4.81 TPY.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average. See b)(2)c. below.
e.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 0.551 pound per hour.
f.	OAC rule 3745-18-06(E)	Sulfur dioxide emissions shall not exceed 12.9 pounds per hour.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by 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 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM and CO emissions from this air contaminant source since the uncontrolled potential to emit for PM and CO is each less than 10 tons/year.

c. Until such time the U.S. EPA approves the revision to OAC rule 3745-31-05, the more stringent or equivalent visible emissions limit established under OAC rule 3745-31-05(A)(3) shall apply. Upon U.S. EPA approval of the revisions to OAC rule 3745-31-05, the rule based limits under OAC rule 3745-17-07(A) shall go into effect.

c) Operational Restrictions

(1) The maximum annual production rate for emission units P039 through P050 shall not exceed 529 batches.

[Authority for term: OAC rule 3745-77-10(A) and PTI P0107566]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the number of batches produced in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. any exceedance of the annual production rate limitation

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

CO emissions shall not exceed 218.22 pounds per batch.

Applicable Compliance Method:

The permittee shall demonstrate compliance in accordance with the methodology outlined in permit application A0041157 associated with PTI P0107566 issued on

4/27/2011. If required, compliance shall be determined using U.S. EPA Methods 1-4 and 10 in accordance with 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1), and PTI P0107566

b. Emission Limitation:

CO emissions shall not exceed 4.81 TPY.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the pounds per batch emission rate by the maximum allowable amount of batches processed per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per batch limitation, compliance with the annual emission limitation shall also be demonstrated.

[Authority for term: OAC rule 3745-77-07(C)(1), and PTI P0107566]

c. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 10 percent opacity

or 20 percent opacity (as applicable) as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

No visible emission observations are specifically required to demonstrate compliance with these emission limitations but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).

[Authority for term: OAC rules 3745-17-03(B)(1), 3745-77-07(C)(1) and PTI P0107566]

d. Emission Limitation:

Particulate emissions shall not exceed 0.551 pound per hour.

Applicable Compliance Method:

If required, compliance shall be determined using U.S. EPA Methods 1-5 in accordance with 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rules 3745-17-10(B)(10), 3745-77-07(C)(1), and PTI P0107566]

e. Emission Limitation:

Sulfur dioxide emissions shall not exceed 12.9 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be determined using U.S. EPA Methods 1-4 and 6 in accordance with 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1), and PTI P0107566]

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to the permitexpiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for CO, in the appropriate averaging period(s).

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Method 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.

d. 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 Division of Air Quality (Cleveland DAQ).

e. 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).

f. 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.

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

g) Miscellaneous Requirements

(1) Emissions unit P039 (scrubber exhaust stack) was most recently performance tested on 3/28/2012 through 3/29/2012 by Air Compliance Testing, Inc. (Job Number: 120310). Emission rates were determined to be the following:

a. Total batch time – 27.0 hours

b. Carbon monoxide – 97.47 lbs/batch

c. Carbon monoxide – 3.61 lbs/hr

8. Emissions Unit Group -Rolling Lines 3 through 6: P023,P024,P025,P026,

EU ID	Operations, Property and/or Equipment Description
P023	Flexible graphite Rolling Line RL 3 consisting of two gas-fired furnaces and rollers equipped with in-line cyclone, venturi quencher and packed bed scrubber system
P024	Flexible graphite Rolling Line RL 4 consisting of two gas-fired furnaces and rollers equipped with in-line cyclone, venturi quencher and packed bed scrubber system
P025	Flexible graphite Rolling Line RL 5 consisting of two gas-fired furnaces and rollers equipped with in-line cyclone, venturi quencher and packed bed scrubber system
P026	Flexible graphite Rolling Line RL 6 consisting of two gas-fired furnaces and rollers equipped with in-line cyclone, venturi quencher and packed bed scrubber system

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (Modified PTI 13-04629 issued 9/18/2007)	Carbon monoxide (CO) emissions shall not exceed 55.53 pounds per hour and 243.22 tons per year (TPY). Nitrogen oxide (NOx) emissions shall not exceed 11.26 pounds per hour and 49.32 TPY. Sulfur dioxide (SO_2) emissions shall not exceed 6.8 pounds per hour and 29.8 TPY. Particulate emissions (PE) shall not exceed 0.98 pound per hour and 4.3 TPY. Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C). See c)(1) below.
b.	OAC rule 3745-31-05(D)(1)(a) Synthetic minor to avoid PSD	CO emissions shall not exceed 245.0 TPY (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the CO emissions. NOx emissions shall not exceed 78.0 TPY (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the NOx emissions. SO_2 emissions shall not exceed 72.0 TPY (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the SO_2 emissions. PE shall not exceed 4.3 TPY (combined for P023, P024, P025, and P026) as a rolling, 12-month summation of the PE emissions. See sections b)(2)d. and c)(9) below.
c.	OAC rule 3745-17-07(A)	See section b)(2)a. below.
d.	OAC rule 3745-17-11(B)	See section b)(2)a. below.
e.	OAC rule 3745-18-06(E)	See section b)(2)a. below.
f.	40 CFR Part 64 Compliance Assurance Monitoring (CAM) for SO_2 emissions	See c)(10), d)(6), and e)(6)

(2) Additional Terms and Conditions

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

b. The tons per year emission limitations for PE, SO_2, CO, and NOx are based on the synthetic minor determination to limit the potential to emit.

c) Operational Restrictions

(1) The permittee shall burn only natural gas in the furnaces associated with this emissions unit.

[Authority for term: OAC rule 3745-77-10(A) and PTI 13-04629]

(2) The scrubber control system shall be in operation whenever the associated rolling line is in operation (graphite flake is being fed).

[Authority for term: OAC rule 3745-77-10(A) and PTI 13-04629]

(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).

[Authority for term: OAC rule 3745-77-10(A) and PTI 13-04629]

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

[Authority for term: OAC rule 3745-77-10(A) and PTI 13-04629]

(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).

[Authority for term: OAC rule 3745-77-10(A) and PTI 13-04629]

(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).

[Authority for term: OAC rule 3745-77-10(A) and PTI 13-04629]

(7) The scrubbing solution recirculation flow rate to the scrubber control system shall be maintained at an hourly average of 15 gallons per minute or greater (as verified by the record keeping in d)(2), whenever the associated rolling line is in operation and shall be monitored by the flow switch located at the discharge line of the recirculation pump. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the rolling line is in operation (graphite flake being fed).

[Authority for term: OAC rule 3745-77-10(A) and PTI 13-04629]

(8) The particulate, SO_2, CO, and NOx emissions (and the corresponding production rates calculated in d)(4) for the four rolling lines (P023, P024, P025, and P026), combined, shall not exceed the rolling, 12-month emission limitations specified in b)(1).

[Authority for term: OAC rule 3745-77-10(A) and PTI 13-04629]

(9) The annual graphite material feed rate shall not exceed twenty-nine and two tenths percent (29.2%) of the potential feed rate for the combined four rolling lines (P023, P024, P025, and P026), based upon a rolling, 12-month summation of the graphite material feed rate.

[Authority for term: OAC rule 3745-77-10(A) and PTI 13-04629]

(10) The pH, static pressure drop, recirculation flow rate, and ORP for the scrubber control system shall be monitored and recorded in 1-hour blocks of time (for a total of 24 blocks per day) while this emissions unit is in operation.

[Authority for term: OAC rule 3745-77-10(A) and 40 CFR Part 64]

d) Monitoring and/or Recordkeeping Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(2) The permittee shall properly operate and maintain equipment to monitor and record the pH, pressure drop across the scrubber, ORP, and recirculation flow rate for each of the scrubber control systems when this emissions unit is in operation. The monitoring and recording devices shall be calibrated, operated, and maintained in accordance with the manufacturers' recommendations, instructions and operating manual(s) with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The recirculation flow switch shall be checked semiannually for functional and operational reliability. At the semiannual check, the scrubbing solution recirculation flow switch position (i.e., the switch is either "made" or "not made") shall be verified and documented. "Made" means the scrubbing solution is flowing at the rate equal to or greater than 15 gallons per minute. "Not made" indicates that there is no pressure or a flow rate less than 15 gallons per minute. The permittee shall maintain records of the semiannual checks for actuation of the flow switch.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(3) The permittee shall collect and record the following information, in averaged 1-hour blocks, when this emissions unit is in operation (graphite flake is being fed):

a. the pH levels of the alkaline sodium hydroxide scrubbing in the first stage of each operating scrubber control system;

b. the pH levels of the alkaline sodium hydroxide scrubbing solution in the second stage of each operating scrubber control system;

c. the ORP levels of the alkaline sodium hypochlorite scrubbing solution in the second stage of each operating scrubber control system;

d. the pressure drop across each operating scrubber control system; and

e. the scrubbing solution recirculation flow switch position. (i.e., "Made" or "not made," where "made" means the scrubbing solution is flowing at the rate equal 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.)

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(4) The permittee shall collect and record the following information for each month for this emissions units:

a. the quantity and type of graphite flake fed to this emissions unit, in tons;

b. the total particulate, SO_2, CO, and NOx emissions, in pounds and tons (calculated using the data from d)(4)a. above and the formulas and production scenario related emissions factors specified below);

c. the total operating shifts and calculated hours of operations for this emissions unit (8 hours equals one shift);

d. the average hourly particulate, SO_2, CO, and NOx emissions rate for this emissions unit, in pounds (from d)(4)a. through d)(4)c. above or from the average hourly emissions rates for the appropriate operating scenario from the most recent emissions tests that demonstrated that the emissions unit was in compliance);

e. the total particulate, SO_2, CO, and NOx emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the summation of the data from d)(4)b. above for each emissions unit); and

f. the rolling, 12-month summation of the particulate, SO_2, CO, and NOx emissions for all four rolling lines (P023, P024, P025, and P026), in tons (i.e., the total particulate, SO_2, CO, and NOx emissions from all four rolling lines for the current month plus the total particulate, SO_2, CO, and NOx emissions from all four rolling lines for the previous 11 months).

The total monthly particulate, SO_2, CO, and NOx emissions for each production scenario shall be calculated in accordance with the following formulas for the rolling line:

Particulate Emissions:

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

SO_2 Emissions

Total tons of SO_2 per month = the summation of (tons of graphite flake fed) X (the appropriate SO_2 emission factor) X (1 ton/2000 pounds) for each production scenario for the rolling line

CO Emissions

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

NOx Emissions

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

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

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

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

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

Processing Scenario	Emission Factor (EF)
#1, #2, and #3	0.036 pound of PE per ton of graphite flake
#1, #2, and #3	0.045 pound of SO_2 per ton of graphite flake
#1, #2, and #3	5.225 pounds of NOx per ton of graphite flake
#1, #2, and #3	25.77 pounds of CO per ton of graphite flake

These emission factors may be updated based on results of emission testing which demonstrates compliance with the emission limitations in b)(1).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(5) The permittee shall collect and record the following information each month for all four rolling lines (P023, P024, P025, and P026):

a. the graphite flake material usage for each month, in pounds and the corresponding percentage of the potential feed rate for the combined four rolling lines; and

b. the rolling, 12-month summation of the graphite material usage figures and the corresponding percentage of the potential feed rate for the combined four rolling lines.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(6) The CAM performance indicator for SO_2 emissions is the scrubber solution pH, scrubber solution recirculation rate (in GPM), pressure drop, and ORP measured in millivolts as specified in the following table:

pH	Scrubber Solution Recirculation (GPM)	Pressure Drop (inches of water column)	ORP (mV)
Stage 1 7.0+ Stage 2 8.0+	15+	0.8+	Stage 2 +700 or +

The CAM performance indicator range as measured by scrubber solution pH, scrubber solution recirculation rate (in GPM), pressure drop, and ORP measured in millivolts is specified in c)(3) through c)(7). When the pH, scrubber solution recirculation rate, pressure drop, and ORP are outside of the indicator range specified in d)(6), corrective action (including, but not limited to, an evaluation of the emissions unit and the control device) will be required.

Upon detecting an excursion of any of the sulfur dioxide emission indicator ranges listed above, the owner or operator shall restore operation of the emissions unit (including the control devices) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion. Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range.

If a determination is made by the Administrator or Ohio EPA that the permittee has not used acceptable procedures in response to an excursion or exceedance based on the results of a determination made under 40 CFR Part 64.7(d)(2), the permittee may be required to develop a Quality Improvement Plan (QIP) consistent with the requirements of 40 CFR Part 64.8.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

e) Reporting Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(2) The permittee shall notify the Cleveland DAQ in writing of any record showing that the scrubber was not in service while the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Cleveland DAQ within 30 days after the event occurs.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(3) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:

a. all scrubber control system pressure drop 1-hour block averages* less than 0.8 inch of water column;

b. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 7.0 in the first stage of the scrubber control system;

c. all pH 1-hour block averages* of the alkaline sodium hydroxide scrubbing solution less than 8.0 in the second stage of the scrubber control system;

d. all ORP 1-hour block averages* of the alkaline sodium hypochlorite scrubbing solution less than positive (+) 700 millivolts in the second stage of the scrubber control system;

e. any 1-hour block average* indicating that the scrubbing solution recirculation flow switch was "not made" when the emissions unit was in operation;

f. any exceedances of the average hourly emission limitations for the rolling line; and

g. anyexceedances of the rolling, 12-month emission limitation for all four rolling lines (P023, P024, P025, and P026), combined.

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

The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(4) The permittee shall submit annual reports to the Cleveland DAQ that specify the total particulate, SO_2, CO, and NOx emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year or by the deadline designated by the annual air fee emissions requirement if the deadline differs from April 15. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual air fee emission report.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(5) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation on the graphite material feed rate, in pounds, and the corresponding percentage of the potential feed rate for the combined four rolling lines; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative graphite material feed rate, in pounds, and the corresponding percentage of the potential feed rate for the combined four rolling lines. All reports identifying the rolling, 12-month limitation on the graphite material feed rate, in pounds, shall be submitted as business confidential.

A sanitized version of the report containing the rolling, 12-month limitation on the graphite material feed rate, identifying the corresponding percentage of the potential feed rate for the combined four rolling lines, shall be submitted for public records.

The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

(6) If the results of monitoring or record keeping data indicate that the SO_2 emission limitations may have been exceeded, the permittee shall submit the results of that data, and document any corrective action taken to restore operation of the emissions unit, or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The reports shall be submitted in accordance with Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PE shall not exceed 0.98 pound per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation shall be demonstrated based upon the records required pursuant to d)(4). Compliance shall be demonstrated based upon the results of the emission testing specified in f)(2).

[Authority for term: OAC rules 3745-31-05(A)(3), 3745-17-10(B)(10), 3745-77-07(C)(1), and PTI 13-04629]

b. Emission Limitation:

Particulate emissions shall not exceed 4.3 TPY.

Applicable Compliance Method:

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

c. Emission Limitation:

SO_2 emissions shall not exceed 6.8 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation shall be demonstrated based upon the records required pursuant to d)(4). Compliance shall be demonstrated based upon the results of the emission testing specified in f)(2).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

d. Emission Limitation:

SO_2 emissions shall not exceed 29.8 TPY.

Applicable Compliance Method:

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

e. Emission Limitation:

NOx emissions shall not exceed 11.26 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation shall be demonstrated based upon the records required pursuant to d)(4). Compliance shall be demonstrated based upon the results of the emission testing specified in f)(2).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

f. Emission Limitation:

NOx emissions shall not exceed 49.32 TPY.

Applicable Compliance Method:

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

g. Emission Limitation:

CO emissions shall not exceed 55.53 pounds per hour.

Applicable Compliance Method:

Compliance with this emissions unit limitation shall be demonstrated based upon the records required pursuant to d)(4). Compliance shall be demonstrated based upon the results of the emission testing specified in f)(2).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

h. Emission Limitation:

CO emissions shall not exceed 243.22 TPY.

Applicable Compliance Method:

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

i. 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 the procedures specified in 40 CFR Part 60, Appendix A, Test Method 9.

[Authority for term: OAC rules 3745-17-03(B)(1), 3745-77-07(C)(1) and PTI 13-04629]

j. 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 d)(4).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

k. Emission Limitation:

SO_2 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 d)(4).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

l. Emission Limitation:

NOx emissions shall not exceed 78.0 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 d)(4).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

m. Emission Limitation:

CO emissions shall not exceed 245.0 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 d)(4).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to the permitexpiration.

b. The emission testing shall be conducted for the scrubber control system serving emissions units P023, P024, P025, and P026 to demonstrate compliance with the PE, SO_2, NOx, and CO mass emission limitations for emissions units P023, P024, P025, and P026. (Emissions units P023, P024, P025, and P026 are identical emissions units; therefore, the permittee may test only one of these emissions units and the results will be representative of the emissions for each of the identical emissions units).

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

Methods 1 through 4 of 40 CFR Part 60, Appendix A;

Method 5 of 40 CFR Part 60, Appendix A for PE;

Method 6 of 40 CFR Part 60, Appendix A for SO_2;

Method 7 of 40 CFR Part 60, Appendix A for NOx; and

Method 10 of 40 CFR Part 60, Appendix A for CO.

Alternative U.S. EPA approved test methods may be used with prior approval from the Cleveland DAQ.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Cleveland DAQ. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. 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).

f. 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.

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 13-04629]

g) Miscellaneous Requirements

(1) Emissions unit P024 (scrubber stack) was most recently performance tested on 5/12/2009 by Air Compliance Testing, Inc. (Job Number: 090505). Emission rates were determined to be the following:

a. Filterable particulate matter – < 0.017 lb/hr

b. Sulfur dioxide – 0.055 lb/hr

c. Nitrogen oxide (as NO_2) – 6.56 lbs/hr

d. Carbon monoxide – 17.0 lb/hr

9. Emissions Unit Group -Rolling Lines 7 through 10: P034,P035,P036,P037,

EU ID	Operations, Property and/or Equipment Description
P034	Graphite Rolling Line - equipped with a scrubber and a recuperative thermal oxidizer
P035	Graphite Rolling Line - equipped with a scrubber and a recuperative thermal oxidizer
P036	Graphite Rolling Line - equipped with a scrubber and a recuperative thermal oxidizer
P037	Graphite Rolling Line - equipped with a scrubber and a recuperative thermal oxidizer

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 (PTI P0107566 issued 4/27/2011)	Nitrogen oxides (NOx) emissions shall not exceed 1.52 pounds per hour and 6.64 tons per year (TPY). Carbon monoxide (CO) emissions shall not exceed 1.06 pounds per hour and 4.64 TPY. Visible particulate emissions from the stack serving this emissions unit shall not exceed 10 percent opacity as a six-minute average. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)b. below.
c.	OAC rule 3745-31-05(F)	See b)(2)c. below.
d.	OAC rule 3745-31-10 thru 20	CO emissions shall not exceed 1.06 pounds per hour and 4.64 TPY.

e.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as provided by rule. See b)(2)d. below.
f.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 3.2 pounds per hour.
g.	OAC rule 3745-18-06(E)	Sulfur dioxide (SO_2) emissions shall not exceed 15.6 pounds per hour.
h.	40 CFR Part 64 Compliance Assurance Monitoring (CAM) for SO_2 and CO emissions.	See c)(4),c)(5), c)(6), d)(8), and e)(3) below.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by 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 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE and OC/VOC emissions from this air contaminant source since the uncontrolled potential to emit for PE and OC/VOC is each less than 10 tons/year.

c. Permit to Install P0107566 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment), as proposed by the permittee, for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A(3):

i. Use of a recuperative thermal oxidizer to control CO emissions (95% control efficiency); and

ii. Use of a three stage wet scrubber to control NOx emissions (65% control efficiency) and sulfur dioxide emissions (99% control efficiency).

d. Until such time the U.S. EPA approves the revision to OAC rule 3745-31-05, the more stringent or equivalent visible emissions established under OAC rule 3745-31-05(A)(3) shall apply. Upon U.S. EPA approval of the revisions to OAC rule 3745-31-05, the rule based limits under OAC rule 3745-17-07(A) shall go into effect.

e. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of recuperative thermal oxidizer constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through (20) above.

c) Operational Restrictions

(1) The permittee shall burn only natural gas in the furnaces associated with this emissions unit.

[Authority for term: OAC rule 3745-77-10(A) and PTI P0107566]

(2) The scrubber control system shall be in operation whenever the associated rolling line is in operation (graphite flake is being fed).

[Authority for term: OAC rule 3745-77-10(A) and PTI P0107566]

(3) The recuperative thermal oxidizer control system shall be in operation whenever the associated rolling line is in operation (graphite flake is being fed).

[Authority for term: OAC rule 3745-77-10(A) and PTI P0107566]

(4) The pH, static pressure drop, and liquid flow rate for the scrubber control system shall be monitored and recorded in 1-hour blocks of time (for a total of 24 blocks per day) while this emissions unit is in operation.

[Authority for term: OAC rule 3745-77-10(A) and 40 CFR Part 64]

(5) The permittee shall maintain the RTO combustion temperature at a minimum value of 1599 degrees Fahrenheit.

[Authority for term: OAC rule 3745-77-10(A) and 40 CFR Part 64]

(6) The permittee shall maintain the scrubber solution pH, scrubber liquid flow rate (in GPM), and pressure drop within the range(s) specified in the following table:

Parameter	pH	Scrubber Liquid Flow Rate (GPM)	Pressure Drop (inches of water column)
Stage 1	10.39 – 10.61	34-35	2.73 – 2.90
Stage 2	8.96 – 9.04	74-75	1.19 – 1.30
Stage 3	10.74 – 10.90	71-74	1.85 – 1.96

[Authority for term: OAC rule 3745-77-10(A) and 40 CFR Part 64]

d) Monitoring and/or Recordkeeping Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range or limit for the pressure drop across the scrubber, the liquid flow rate, and the liquid pH shall be based upon the ranges specified in d)(8).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(3) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge), the scrubber liquid flow rate (in gallons per minute), and the scrubber liquid pH during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubber and the scrubber liquid's pH and flow rate on a daily basis. 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..

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date the corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop, flow rate, and pH readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(4) These range(s) and/or limit(s) for the pressure drop, liquid flow rate, and pH are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (Cleveland DAQ). The permittee may request revisions to the permitted range or limit for the pressure drop, liquid flow rate, or pH based upon information obtained during future performance tests that demonstrate compliance with the allowable NOx emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(5) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable combustion temperature within the thermal oxidizer, during any period of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance..

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(6) The permittee shall properly operate and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and

shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(7) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(8) The CAM performance indicator for CO emissions is the combustion temperature for the thermal oxidizer as specified in the following table:

Combustion Temperature	1599° F

The CAM performance indicators for sulfur dioxide emissions are the scrubber solution pH, scrubber liquid flow rate (in GPM), and pressure drop as specified in the following table:

Parameter	pH	Scrubber Liquid Flow Rate (GPM)	Pressure Drop (inches of water column)
Stage 1	10.39 – 10.61	34 - 35	2.73 – 2.90
Stage 2	8.96 – 9.04	74 - 75	1.19 – 1.30
Stage 3	10.74 – 10.90	71 - 74	1.85 – 1.96

The CAM performance indicator as measured by combustion temperature is specified in c)(5). When the pressure drops are outside of the indicator range specified in d)(8), corrective action (including, but not limited to, an evaluation of the emissions unit and the control device) will be required.

The CAM performance indicator ranges as measured by scrubber solution pH, scrubber liquid flow rate (in GPM), and pressure drop are specified in c)(6). When the pH, scrubber liquid flow rate, and pressure drop are outside of the indicator range specified in d)(8), corrective action (including, but not limited to, an evaluation of the emissions unit and the control device) will be required.

Upon detecting an excursion of any of the particulate and/or sulfur dioxide emission indicator ranges listed above, the owner or operator shall restore operation of the emissions unit (including the control devices) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion. Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range.

If a determination is made by the Administrator or Ohio EPA that the permittee has not used acceptable procedures in response to an excursion or exceedance based on the results of a determination made under 40 CFR Part 64.7(d)(2), the permittee may be required to develop a Quality Improvement Plan (QIP) consistent with the requirements of 40 CFR Part 64.8.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

e) Reporting Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(2) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that include the following information:

a. For the wet scrubber control system:

i. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber, the liquid flow rate, or the liquid pH was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;

ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation (graphite flake is being fed) and the process emissions were not vented to the scrubber;

iii. each incident of deviation described in “i” or “ii” (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in “i” or “ii” where prompt corrective action, that would bring the pressure drop, liquid flow rate, and/or scrubber liquid pH into compliance with the acceptable range, was determined to be necessary and was not taken; and

v. each incident of deviation described in “i” or “ii” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

b. For the recuperative thermal oxidizer:

i. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

ii. any records of downtime (date and length of time) for the capture (collection) system, the thermal oxidizer, and/or the monitoring equipment when the emissions unit(s) was/were in operation (graphite flake is being fed); and

iii. a log of the operating time for the capture system, thermal oxidizer, monitoring equipment, and the emissions unit(s).

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

(3) If the results of monitoring or record keeping data indicate that the CO and SO_2 emissions limitations may have been exceeded, the permittee shall submit the results of that data, and document any corrective action taken to restore operation of the emissions unit, or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The reports shall be submitted in accordance with Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. Hourly Emissions Limitations:

NOx emissions shall not exceed 1.52 pounds per hour.

CO emissions shall not exceed 1.06 pounds per hour.

Applicable Compliance Method:

The permittee shall demonstrate compliance in accordance with the methodology outlined in permit application A0041157 associated with PTI P0107566 issued on 4/27/2011.

If required, compliance shall be determined using U.S. EPA Methods 1-4, 7, and 10 in accordance with 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1), and PTI P0107566]

b. Annual Emissions Limitations:

NOx emissions shall not exceed 6.64 TPY.

CO emissions shall not exceed 4.64 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the pound per hour allowable for each pollutant by the maximum operating schedule of 8760 hours per year and dividing by 2000 pounds per ton. Therefore, provided compliance is maintained with the pounds per hour limitation, compliance with the annual emission limitation shall also be demonstrated.

[Authority for term: OAC rule 3745-77-07(C)(1), and PTI P0107566]

c. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 10 percent opacity or 20 percent opacity (as applicable) as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

No visible emission observations are specifically required to demonstrate compliance with these emission limitations but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).

[Authority for term: OAC rules 3745-17-03(B)(1), 3745-77-07(C)(1) and PTI P0107566]

d. Emission Limitation:

Particulate emissions shall not exceed 3.2 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be determined using U.S. EPA Methods 1-5 in accordance with 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rules 3745-31-05(A)(1), 3745-17-10(B)(10), 3745-77-07(C)(1), and PTI P0107566]

e. Emission Limitation:

SO_2 emissions shall not exceed 15.6 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be determined using U.S. EPA Methods 1-4 and 6 in

accordance with 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1), and PTI P0107566]

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months prior to the permit expiration.

b. The emission testing shall be conducted for the scrubber/recuperative thermal oxidizer control system serving this emissions unit to demonstrate compliance with the NOx and CO emission limitations. (Emissions units P034, P035, P036, and P037 are identical emissions units; therefore, the permittee may test only one of these emissions units and the results will be representative of the emissions for each of the identical emissions units).

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

Methods 1 through 4 of 40 CFR Part 60, Appendix A;

Method 7 of 40 CFR Part 60, Appendix A for NOx; and

Method 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 CDAQ.

d. 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.

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

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).

g. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0107566]

g) Miscellaneous Requirements

(1) Emissions units P034 through P037 (RTO exhaust stack) were performance tested on 10/2/2012 by Air Compliance Testing, Inc. (Job Number: 121004). Emission rates were determined to be the following:

a. Sulfur dioxide – 0.89 lb/hr

b. Nitrogen oxide (as NO_2) – 0.49 lb/hr

c. Carbon monoxide – 0.63 lb/hr