



Environmental
Protection Agency

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

5/26/2011

Matt Reineke
RADTECH
1025 FAULTLESS DRIVE
ASHLAND, OH 44805

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0303010170
Permit Number: P0107643
Permit Type: OAC Chapter 3745-31 Modification
County: Ashland

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPCWeb page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: Ohio EPA-NWDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
RADTECH**

Facility ID: 0303010170
Permit Number: P0107643
Permit Type: OAC Chapter 3745-31 Modification
Issued: 5/26/2011
Effective: 5/26/2011
Expiration: 5/13/2019



Division of Air Pollution Control
Permit-to-Install and Operate
for
RADTECH

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Authorization

Facility ID: 0303010170
Application Number(s): A0041296
Permit Number: P0107643
Permit Description: This permit is a Chapter 31 modification to the existing 50" furnaces (P007 and P008) and the 96" furnaces (P004, P009 and P010) to allow for an additional operating scenario (carbon purification).
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$1,000.00
Issue Date: 5/26/2011
Effective Date: 5/26/2011
Expiration Date: 5/13/2019
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

RADTECH
692 US ROUTE 224
Nova, OH 44859

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

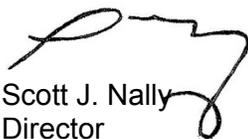
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0107643

Permit Description: This permit is a Chapter 31 modification to the existing 50" furnaces (P007 and P008) and the 96" furnaces (P004, P009 and P010) to allow for an additional operating scenario (carbon purification).

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Group Name: 50" Induction Furnaces

Emissions Unit ID:	P007
Company Equipment ID:	RADG107
Superseded Permit Number:	P0104314
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P008
Company Equipment ID:	RADG108
Superseded Permit Number:	P0104356
General Permit Category andType:	Not Applicable

Group Name: 96" Induction Furnaces

Emissions Unit ID:	P004
Company Equipment ID:	G1
Superseded Permit Number:	P0104314
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P009
Company Equipment ID:	G2
Superseded Permit Number:	P0104356
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P010
Company Equipment ID:	G3
Superseded Permit Number:	P0104356
General Permit Category andType:	Not Applicable

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Northwest District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit 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.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

¹Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -50" Induction Furnaces: P007, P008,

EU ID	Operations, Property and/or Equipment Description
P007	50" Electric Induction Furnace
P008	50" Electric Induction Furnace

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
- (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
- a. d)(3).
- (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
- a. None.
- 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(F)	<u>During carbon purification:</u> Chlorine (Cl ₂) emissions shall not exceed 0.08 lb/hr and 0.01 tpy for emissions units P004, P007, P008, P009 and P010 combined. See b)(2)a. and c)(1).
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	<u>During graphitization:</u> PM ₁₀ shall not exceed 1.35 pound per hour and 0.37 tons per year (tpy), from each emissions unit individually. Carbon monoxide (CO) emissions shall not exceed 3.90 lb/hr and 1.08 tpy, from each emissions unit individually. Sulfur dioxide (SO ₂) emissions shall not

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>exceed 3.33 lbs/hr and 0.92 tpy, from each emissions unit individually.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 1.00 lb/hr and 0.28 tpy, from each emissions unit individually.</p> <p><u>During carbon purification:</u> PM₁₀ shall not exceed 8.33 lb/hr and 2.60 tpy, for emissions units P004, P007, P008, P009 and P010 combined.</p> <p>See b)(2)b. and b)(2)c.</p>
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/2006	See b)(2)d.
d.	OAC rule 3745-18-06(E)	See b)(2)e.
e.	OAC rule 3745-17-11(B)	See b)(2)f.
f.	OAC rule 3745-17-07(A)	See b)(2)g.

(2) Additional Terms and Conditions

a. This permit establishes the following legally and practically enforceable emission limitations for the purpose of limiting the potential to emit (PTE) for these emissions unit while operating in carbon purification mode. The legally and practically enforceable emission limitations are voluntary restrictions established under OAC rule 3745-31-05(F) and are based on the operational restrictions contained in c)(1) which requires the use of control equipment:

- i. Cl₂ emissions shall not exceed 0.08 lb/hr and 0.01 tpy for emissions units P004, P007, P008, P009 and P010 combined; and
- ii. use of a scrubber with a 99.5% control efficiency for Cl₂.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

b. Best Available Technology (BAT) requirements for these emissions units, while operating in carbon purification mode, have been determined to be compliance with the voluntary restrictions established in accordance with OAC rule 3745-31-05(F) [see b)(2)a.]. The voluntary restrictions were intentionally established to be consistent with the BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 for two specific purposes as indicated below:

- i. BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 would be fulfilled by compliance with the voluntary restrictions;
- ii. The emissions unit will avoid any BAT requirements under OAC rule 3745-31-05(A)(3), as effective 12/01/06 [see b)(2)c.].

c. The permittee has satisfied BAT requirements pursuant to 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants 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 3745-31-05, then these emission limits/control measures no longer apply.

It should be noted that the requirements established pursuant to OAC rule 3745-31-05(F) will remain applicable after the above SIP revisions are approved by U.S. EPA.

d. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the SIP.

BAT requirements under OAC rule 3745-31-05(A)(3) are not applicable to the Cl₂ emitted from these emissions units. BAT is only applicable to emissions of an air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. Cl₂ is an air contaminant that does not involve an established NAAQS.

BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM₁₀, CO, VOC and SO₂ emissions from these air contaminant sources, while operating in graphitization mode, since the uncontrolled potential to emit for each is less than 10 tons per year during this process.

e. These emissions unit are exempt from the emission limitations for SO₂ specified in OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C), because the process equipment has a rated capacity equal to, or less than, one thousand pounds per hour process weight input.

f. The uncontrolled mass rate of PE from these emissions units are less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II in OAC rule 3745-17-11 does not apply. Also, Table 1 does not apply because the facility is located in Ashland County.

g. These emissions units are exempt from the visible PE limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because OAC rule 3745-17-11 is not applicable.

c) Operational Restrictions

- (1) The following operational restriction has been included in this permit for the purpose of establishing legally and practically enforceable requirements which limit the PTE: [See b)(2)a.]
 - a. These emissions units shall be vented to a scrubber with a control efficiency of 99.5% for Cl₂ during the carbon purification process.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitations 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.
- (2) The permittee shall properly install, 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 these emissions units, 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 weekly basis. The monitoring equipment 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 acceptable pressure drop, 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 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 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:

- a. a description of the corrective action;
- b. the date the corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop, flow rate, and pH readings immediately after the corrective action was implemented; and
- f. 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 ranges and/or limits 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 appropriate Ohio EPA District Office or local air agency. 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 **chlorine** emission rate for these emissions units. 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.

- (3) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for the operation of the scrubber during the 12-month reporting period for these emissions units:
- a. 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;
 - b. any period of time (start time and date, and end time and date) when the emissions units were in operation and the process emissions were not vented to the scrubber;
 - c. each incident of deviation described in e)(2)a. or e)(2)b. (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in e)(2)a. or e)(2)b. 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
 - e. each incident of deviation described in e)(2)a. or e)(2)b. 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.

f) **Testing Requirements**

- (1) Compliance with the emission limitations in section b)(1) shall be determined in accordance with the following methods:

a. During graphitization:

i. Emission Limitation:

PM₁₀ emissions shall not exceed 1.35 lb/hr and 0.37 tpy, from each emissions unit individually.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 8,000 pounds of carbon block/batch, an emission factor of 4.06 lbs/ton (stack test of similar facility), dividing by an emission release time of 12 hours per batch and dividing by the conversion factor of 2000 pounds per ton. If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 40 CFR Part 51, Appendix M, Method 201/201A and 202.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual

production rate of 46 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

ii. Emission Limitation:

CO emissions shall not exceed 3.90 lb/hr and 1.08 tpy, from each emissions unit individually.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 8,000 pounds of carbon block/batch, an emission factor of 11.71 lbs/ton (stack test of similar facility), dividing by an emission release time of 12 hours per batch and dividing by the conversion factor of 2000 pounds per ton. If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 10.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual production rate of 46 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

iii. Emission Limitation:

SO₂ emissions shall not exceed 3.33 lbs/hr and 0.92 tpy, from each emissions unit individually.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 2,500 pounds of carbon fiber/batch, a sulfur content of 0.8% by weight, the ratio of 2 pounds of sulfur dioxide/one pound sulfur and dividing by an emission release time of 12 hours per batch. If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 6.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual production rate of 46 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

iv. Emission Limitation:

VOC emissions shall not exceed 1.0 lbs/hr and 0.28 tpy, from each emissions unit individually.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 800 pounds of product/batch (worst case product for VOC), a VOC content of 1.5% by weight and dividing by an emission release time of 12 hours per batch. If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 18, 25, or 25A.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual production rate of 46 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

b. During carbon purification:

i. Emission Limitation:

PM₁₀ emissions shall not exceed 4.17 lb/hr and 1.30 tpy, combined for emissions unit P004, P007, P008, P009 and P010.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 10,000 pounds of carbon felt/batch, an ash content of 1% and dividing by an emission release time of 12 hours per batch. If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 40 CFR Part 51, Appendix M, Method 201/201A and 202.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual production rate of 52 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

ii. Emission Limitation:

Cl₂ emissions shall not exceed 0.080 lbs/hr and 0.010 tpy, combined for emissions unit P004, P007, P008, P009 and P010.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the chlorine gas flow rate of 1.25 cfm, by 60 minutes per hour, by the density 0.2 lb/cf and applying a control efficiency of 99.5%. If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 26 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual production rate of 52 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

- g) Miscellaneous Requirements
 - (1) None.

2. Emissions Unit Group -96" Induction Furnaces: P004, P009, P010,

EU ID	Operations, Property and/or Equipment Description
P004	96" Electric Indusction Furnace
P009	96" Electric Induction Furnace
P010	96" Electric Induction Furnace

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. d)(5).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

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(F)	<p><u>During graphitization:</u> Volatile organic compound (VOC) emissions shall not exceed 28.05 pounds per hour (lbs/hr) and 6.23 tons per year (tpy).</p> <p><u>During carbon purification:</u> Chlorine (Cl₂) emissions shall not exceed 0.08 lb/hr and 0.01 tpy for emissions units P004, P007, P008, P009 and P010 combined.</p> <p>See b)(2)a.</p>
b.	OAC rule 3745-31-05(A)(3), as effective 11/31/2001	<p><u>During graphitization:</u> Carbon monoxide (CO) emissions shall not exceed 2.93 lbs/hr and 0.65 tpy, from each emissions unit individually.</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Sulfur dioxide (SO₂) emissions shall not exceed 8.0 lbs/hr and 1.73 tpy, from each emissions unit individually.</p> <p>Particulate matter less than 10 microns in size (PM₁₀) shall not exceed 1.02 lbs/hr and 0.23 tpy, from each emissions unit individually.</p> <p><u>During carbon purification:</u> PM₁₀ shall not exceed 8.33 lbs/hr and 2.60 tpy, for emissions units P004, P007, P008, P009 and P010 combined.</p> <p>See b)(2)b. and b)(2)c.</p>
c.	OAC rule 3745-05(A)(3), as effective 12/01/06	See b)(2)d.
d.	OAC rule 3745-18-06(E)	See b)(2)e.
e.	OAC rule 3745-17-11(B)	See b)(2)f.
f.	OAC rule 3745-17-07(A)	See b)(2)g.

(2) Additional Terms and Conditions

a. This permit establishes the following legally and practically enforceable emission limitations for the purpose of limiting the potential to emit (PTE). The legally and practically enforceable emission limitations are voluntary restrictions established under OAC rule 3745-31-05(F) and are based on the operational restrictions contained in c)(1) which requires the use of control equipment:

i. During graphitization:

- (a) VOC emissions shall not exceed 28.05 lbs/hr and 6.23 tpy; and
- (b) use of a thermal oxidizer capable of achieving a 90% destruction efficiency for emissions of VOCs.

ii. During carbon purification:

- (a) Cl₂ emissions shall not exceed 0.080 lb/hr and 0.01 tpy for emissions units P004, P007, P008, P009 and P010 combined; and
- (b) use of a scrubber with a 99.5% control efficiency for Cl₂.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- b. Best Available Technology (BAT) requirements for these emissions units have been determined to be compliance with the voluntary restrictions established in accordance with OAC rule 3745-31-05(F) [see b)(2)a.]. The voluntary restrictions were intentionally established to be consistent with the BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 for two specific purposes as indicated below:
- i. BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 would be fulfilled by compliance with the voluntary restrictions;
 - ii. The emissions unit will avoid any BAT requirements under OAC rule 3745-31-05(A)(3), as effective 12/01/06 [see b)(2)c.].
- c. The permittee has satisfied BAT requirements pursuant to 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants 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 3745-31-05, then these emission limits/control measures no longer apply.

It should be noted that the requirements established pursuant to OAC rule 3745-31-05(F) will remain applicable after the above SIP revisions are approved by U.S. EPA.

It should also be noted that emissions of nitrogen oxides, carbon monoxide, volatile organic compounds, sulfur dioxide, and particulate matter less than 10 microns in size are generated as products of combustion from the use of natural gas in the thermal oxidizer. The potential emissions from all products of combustion are based on a maximum heat input of 3.2 mmBtu/hour and result in negligible emissions of each pollutant. Therefore, these pollutants have not been addressed through individual BAT limitations for natural gas combustion in this permit.

- d. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the SIP.

BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from these air contaminant sources since the controlled potential to emit is less than 10 tons per year taking into consideration the practically and legally enforceable voluntary restrictions established under OAC rule 3745-31-05(F) in this permit.

BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM₁₀, CO, and SO₂, emissions from these air contaminant sources since the uncontrolled potential to emit for each is less than 10 tons per year.

BAT requirements under OAC rule 3745-31-05(A)(3) are not applicable to the Cl₂ emitted from these emissions units. BAT is only applicable to emissions of an air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. Cl₂ is an air contaminant that does not involve an established NAAQS.

- e. These emissions units are exempt from the emission limitations for SO₂ specified in OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C), because the process equipment has a rated capacity equal to, or less than, one thousand pounds per hour process weight input.
- f. The uncontrolled mass rate of PE from these emissions units are less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II in OAC rule 3745-17-11 does not apply. Also, Table 1 does not apply because the facility is located in Ashland County.
- g. These emissions unit are exempt from the visible PE limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because OAC rule 3745-17-11 is not applicable.

c) **Operational Restrictions**

- (1) The following operational restrictions have been included in this permit for the purpose of establishing the following legally and practically enforceable requirements which limit PTE: [See b)(2)a.]
 - a. This emissions unit shall be exhausted to a thermal oxidizer during graphitization, with a destruction efficiency of 90% for VOCs.
 - b. This emissions unit shall be vented to a scrubber during carbon purification, with a control efficiency of 99.5% for Cl₂.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the combustion temperature within the thermal oxidizer when these emissions units are in operation, including periods of startup and shutdown. The permittee shall record the combustion temperature on a once per shift basis. The monitoring equipment 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 acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance. These records shall be maintained at the facility for a period of no less than 3 years.
- (2) 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 appropriate Ohio EPA District Office or local air agency. 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 VOC emission rate for these emissions units. 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.

- (3) In order to maintain compliance with the applicable emission limitations 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.

- (4) The permittee shall properly install, 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 these emissions units, 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 weekly basis. The monitoring equipment 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 acceptable pressure drop, 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:

- a. a description of the corrective action;
- b. the date the corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop, flow rate, and pH readings immediately after the corrective action was implemented; and
- f. 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 ranges and/or limits 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 appropriate Ohio EPA District Office or local air agency. 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 **chlorine** emission rate for these emissions units. 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.

- (5) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (2) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the thermal oxidizer during the 12-month reporting period for these emissions units:
 - a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;
 - b. any period of time (start time and date, and end time and date) when the emissions units were in operation and the process emissions were not vented to the thermal oxidizer;
 - c. each incident of deviation described in e)(2)a. or e)(2)b. (above) where a prompt investigation was not conducted;

- d. each incident of deviation described in e)(2)a. or e)(2)b. where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in e)(2)a. or e)(2)b. where proper records were not maintained for the investigation and/or the corrective action(s).
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for the operation of the scrubber during the 12-month reporting period for these emissions units:
- a. 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;
 - b. any period of time (start time and date, and end time and date) when the emissions units were in operation and the process emissions were not vented to the scrubber;
 - c. each incident of deviation described in e)(3)a. or e)(3)b. (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in e)(3)a. or e)(3)b. 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
 - e. each incident of deviation described in e)(3)a. or e)(3)b. 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.
- f) **Testing Requirements**
- (1) Compliance with the emission limitations in section b)(1) shall be determined in accordance with the following methods:
- a. Graphitization process:
 - i. Emission Limitation:

PM₁₀ emissions shall not exceed 1.02 lbs/hr and 0.23 tpy, from each emissions unit individually.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 6,000 pounds of carbon fiber/batch, an emission factor of 4.06 lbs/ton (stack test of similar facility), dividing by an

emission release time of 12 hours per batch and dividing by the conversion factor of 2000 pounds per ton. If required, compliance shall demonstrate in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 40 CFR Part 51, Appendix M, Method 201/201A and 202.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual production rate of 37 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

ii. Emission Limitation:

CO emissions shall not exceed 2.93 lbs/hr and 0.65 tpy, from each emissions unit individually.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 6,000 pounds of carbon fiber/batch, an emission factor of 11.71 lbs/ton (stack test of similar facility), dividing by an emission release time of 12 hours per batch and dividing by the conversion factor of 2000 pounds per ton. If required, compliance shall demonstrate in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 10.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual production rate of 37 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

iii. Emission Limitation:

SO₂ emissions shall not exceed 8.0 lbs/hr and 1.78 tpy, from each emissions unit individually.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 6,000 pounds of carbon fiber/batch, a sulfur content of 0.8% by weight, the ratio of 2 pounds of sulfur dioxide/one pound sulfur and dividing by an emission release time of 12 hours per batch. If required, compliance shall demonstrate in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 6.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual

production rate of 37 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

iv. Emission Limitation:

VOC emissions shall not exceed 28.05 lbs/hr and 6.23 tpy, from each emissions unit individually.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 4000 pounds of product/batch (worst case product for VOC emissions), a VOC content of 15.3% by weight, by 0.5 (assuming a minimum capture efficiency of 50% for the control device), by 1.1 (to account for emissions not captured by the control device and a 90% destruction efficiency) and dividing by an emission release time of 12 hours per batch. If required, compliance shall demonstrate in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 18, 25, or 25A.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual production rate of 37 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

b. Carbon purification process

i. Emission Limitation:

PM10 emissions shall not exceed 8.33 lbs/hr and 2.60 tpy, combined for emissions unit P004, P007, P008, P009 and P010.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum process throughput of 10,000 pounds of carbon felt/batch, an ash content of 1% and dividing by an emission release time of 12 hours per batch. If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 4, and 40 CFR Part 51, Appendix M, Method 201/201A and 202.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by a maximum number of 52 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

ii. Emission Limitation:

Cl₂ emissions shall not exceed 0.08 lb/hr and 0.030 tpy, combined for emissions unit P004, P007, P008, P009 and P010.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the chlorine gas flow rate of 1.25 cfm, by 60 minutes per hour, by 0.2 and dividing by an emission release time of 12 hours per batch. If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 26 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual emission limitation was established by multiplying the hourly emission limitation by 12 hours per batch, by the maximum annual production rate of 52 batches per year and dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

g) Miscellaneous Requirements

(1) None.