



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
CUYAHOGA COUNTY**

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 13-03054

DATE: 11/20/2001

UCAR Graph Tech Inc
Elizabeth Good
11709 Madison Avenue
Lakewood, OH 44107

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

CBAPC



**Permit To Install
Terms and Conditions**

**Issue Date: 11/20/2001
Effective Date: 11/20/2001**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 13-03054

Application Number: 13-03054
APS Premise Number: 1318281215
Permit Fee: **\$100**
Name of Facility: UCAR Graph Tech Inc
Person to Contact: Elizabeth Good
Address: 11709 Madison Avenue
Lakewood, OH 44107

Location of proposed air contaminant source(s) [emissions unit(s)]:
**11709 Madison Avenue
Lakewood, Ohio**

Description of proposed emissions unit(s):
Modification of a flexible graphite material treatment system, PTI 13-03054 issued July 3, 1996, to accurately reflect emissions of VOC and SO2.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS**A. State and Federally Enforceable Permit To Install General Terms and Conditions****1. Monitoring and Related Recordkeeping and Reporting Requirements**

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous

calendar quarters. See B.10 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

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

declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and 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. 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.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are

required under the Act, or any 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.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Source Operation and Operating Permit Requirements After Completion of Construction

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

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

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

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

3. 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.

4. 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.

5. Termination of Permit To Install

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

6. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

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

7. Public Disclosure

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

8. Applicability

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

9. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

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

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

C. Permit To Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	4.99
SO ₂	2.23
NO _x	15.64
CO	78.23
VOC	3.07

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None

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

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P017 - GRAFOIL flexible graphite edge trimming collection system. Company identification is GRAFOIL Edge Trimming Collection System. Modified	OAC rule 3745-31-05(A)(3)	Maximum emissions of: 0.88 lb PM/hr
	OAC rule 3745-15-07	Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.
	OAC rule 3745-17-11(B)	This source identified in this permit may not cause a public nuisance in violation of OAC rule 3745-15-07.
	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). 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).

2. Additional Terms and Conditions

- 2.a The BAT determined for this source is control of particulate emissions by a cartridge filter dust collector rated at 4,000 ACFM with a minimum emission control efficiency of 90% by weight.

II. Operational Restrictions

- 1. The pressure drop across the cartridge filter dust collector shall be maintained at a minimum of 1.0 inch of water column while the emissions unit is in operation.

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Emissions Unit ID: **P017**

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment in good working condition to monitor the pressure drop across the cartridge filter dust collector while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the cartridge filter dust collector on an hourly basis. This facility shall keep and maintain these records for a minimum of 5 years.

IV. Reporting Requirements

1. The permittee shall submit a written report semi-annually to the field office of the Ohio EPA, namely, Cleveland Air Pollution Control within thirty one (31) days at the end of each reporting period:
 - a. the deviations (excursions) from parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit;
 - b. the probable cause(s) of each deviation; and
 - c. any corrective actions or preventive measures which have been or will be taken and if there were no excursions the report shall indicate likewise. The parameters to be included in this report are the pressure drop in inches of water column across the cartridge filter dust collector.
2. The written semi-annual report shall be submitted by January 31 and July 31 of each year and shall address the data obtained during previous calendar semi-annual reporting period (July through December, January through June, respectively) to the Cleveland Bureau of Engineering Services.

V. Testing Requirements

1. Compliance with the emission limitations of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
Visible particulate emissions shall not exceed 10% opacity, as a six-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,

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Appendix A, Method 9 and the procedures specified in OAC rule 374-17-03(B)(1).

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Facility ID: 1318281215

Emissions Unit ID: P017

- b. Emission Limitation:
0.88 lb PM/hr

Applicable Compliance Method:

If required, the permittee shall determine compliance with this emission limitation through emissions 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). If applicable, alternative U.S. EPA test methods may be used with prior approval from the Ohio EPA.

VI. Miscellaneous Requirements

None

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P017 - GRAFOIL flexible graphite edge trimming collection system. Company identification is GRAFOIL Edge Trimming Collection System.		

2. Additional Terms and Conditions**2.a** None**II. Operational Restrictions**

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

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VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	OAC rule 3745-18-06(E)
P018 - Modified new flexible graphite material treatment system. Company identification is East Material Treatment System.	OAC rule 3745-31-05(A)(3)	
Modified	OAC rule 3745-15-07	
	OAC rule 3745-17-11(B)	
	OAC rule 3745-17-07(A)	

Applicable Emissions
Limitations/Control
Measures

Maximum emissions of:
0.26 lb PM/hr, 1.14 tons
PM/yr
3.57 lbs NO_x/hr, 15.64 tons
NO_x/yr
0.51 lb SO₂/hr, 2.23 ton
SO₂/yr
17.86 lbs CO/hr, 78.23 tons
CO/yr

0.70 lb VOC/hr, 3.07 tons
VOC/yr

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

This source identified in this
permit may not cause a
public nuisance in violation
of OAC rule 3745-15-07.

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

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).

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

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2. Additional Terms and Conditions

- 2.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.

II. 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).
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 and the ORP control systems shall be calibrated 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 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; and
 - 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).
3. The permittee shall burn only natural gas in this emissions unit.
4. The three-stage wet scrubber will be operated under either Process Operating Scenario #1 or Process Operating Scenario #2.
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):

Emissions Unit ID: P018

- a. Stage 1 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 1 shall be maintained at 9.0 or greater. The ORP of Stage 1 scrubbing solution shall be maintained at negative 500 or less (i.e., can be more negative).
 - b. Stage 2 will be operated using a scrubbing solution of sodium hydroxide only. The pH of the scrubbing solution in Stage 2 shall be maintained at 8.0 or greater. The ORP of Stage 2 scrubbing solution is not regulated.
 - c. Stage 3 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 3 shall be maintained at 9.0 or greater. The ORP of Stage 3 scrubbing solution shall be maintained at negative 400 or less (i.e., can be more negative).
6. For Process Operating Scenario #2, 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 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 1 shall be maintained at 9.0 or greater. The ORP of Stage 1 scrubbing solution shall be maintained at negative 550 or less (i.e., can be more negative).
 - b. Stage 2 will be operated using a scrubbing solution of sodium chlorite and sodium hydroxide. The pH of the scrubbing solution in Stage 2 shall be maintained at 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).
 - c. Stage 3 will be operated using a scrubbing solution of sodium hydroxide and sodium hydrosulfide. The pH of the scrubbing solution in Stage 3 shall be maintained at 9.0 or greater. The ORP of Stage 3 scrubbing solution shall be maintained at negative 475 or less (i.e., can be more negative).

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall install, 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 Director (the appropriate District Office or local air agency). The monitoring devices shall be capable of accurately measuring the desired parameters. The permittee shall collect and record on an hourly basis the following information 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).

2. 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.
3. The permittee shall record the amount of graphite flake fed into the emissions units, in tons, on a daily basis.
4. The permittee shall record the number of shifts operated at the emissions units on a daily basis. Shifts will be considered to be 8 hours in duration unless otherwise specified by the permittee and approved by the Director (the appropriate District Office or local air agency).

IV. Reporting Requirements

1. The permittee shall submit semi-annual written reports that identify all deviations (excursions), exceedance(s) and non-compliance periods of time for the following:
 - a. all pH readings of Stage 1 scrubbing solution less than 9.0 when in Process Operating Scenario #1 and Process Operating Scenario #2;
 - b. all pH readings of Stage 2 scrubbing solution less than 8.0 when in Process Operating Scenario #1 and greater than 9.0 when in Process Operating Scenario #2;
 - c. all pH readings of Stage 3 scrubbing solution less than 9.0 when in Process Operating Scenario #1 and Process Operating Scenario #2;
 - d. all ORP readings of Stage 1 scrubbing solution greater than negative 500 (more positive than -500) when in Process Operating Scenario #1 and greater than negative 550 (more positive than -550) when in Process Operating Scenario #2;
 - e. all ORP readings of Stage 2 scrubbing solution less than positive 300 when in Process Operating Scenario #2. ORP for Scenario #1 is not regulated;
 - f. all ORP readings of Stage 3 scrubbing solution greater than negative 400 (more positive than -400) when in Process Operating Scenario #1 and greater than negative 475 (more

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positive than -475) when in Process Operating Scenario #2;

- g. all readings of pressure drop across the three stages of the scrubber system less than 1.0 inch of water column;
- h. all readings of pressure drop across the cartridge filter dust collector less than 0.25 inch of water column; and
- i. any time period the 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).

The written semi-annual reports shall be submitted by January 31 and July 31 of each year and shall address the information obtained during the previous six calendar month reporting period (July through December and January through June, respectively) to the Director (the appropriate Ohio EPA District Office or local air agency). If reports or documented material contain confidential information, submit a sanitized version for public record along with the required reports.

- 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.

V. Testing Requirements

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

- a. Emission Limitation:
0.26 lb PM/hr, 1.14 tons PM/yr

Applicable Compliance Method:

Compliance with the hourly PM limitation shall be determined from the following equation, based upon emission factors developed by the permittee from the emission stack test conducted on June 15, 2001:

$$E = (0.068 \text{ lbs PM/ton flake fed}) \times (\text{ton flake fed/day}) \times [1 \text{ day}/(\text{no. of shifts} \times 8 \text{ hrs})]$$

where E = PM emission rate (lbs/hr);

the no. of shifts shall be determined by the record keeping as specified in Section III.4.;

and

the ton flake fed/day shall be determined by the record keeping as specified in Section III.3.

The ton per year limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

If required, the permittee shall determine compliance with this emission limitation through emissions 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). If applicable, alternative U.S. EPA test methods may be used with prior approval from the Ohio EPA.

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- b. Emission Limitation:
3.57 lbs NO_x/hr, 15.64 tons NO_x/yr

Applicable Compliance Method:

Compliance with the hourly NO_x limitation shall be determined from the following equation, based upon emission factors developed by the permittee from the emission stack test conducted on June 15, 2001:

$$E = (0.458 \text{ lbs NO}_x/\text{ton flake fed}) \times (\text{ton flake fed/day}) \times [1 \text{ day}/(\text{no. of shifts} \times 8 \text{ hrs})]$$

where E = NO_x emission rate (lbs/hr);

the no. of shifts shall be determined by the record keeping as specified in Section III.4.; and

the ton flake fed/day shall be determined by the record keeping as specified in Section III.3.

The ton per year limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

If required, the permittee shall determine compliance with this emission limitation through emissions tests performed in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 7E. If applicable, alternative U.S. EPA test methods may be used with prior approval from the Ohio EPA.

- c. Emission Limitation:
0.51 lb SO₂/hr, 2.23 ton SO₂/yr

Applicable Compliance Method:

Compliance with the hourly SO₂ limitation shall be determined from the following equation, based upon emission factors developed by the permittee from the emission stack test conducted on June 15, 2001:

$$E = (0.041 \text{ lbs SO}_2/\text{ton flake fed}) \times (\text{ton flake fed/day}) \times [1 \text{ day}/(\text{no. of shifts} \times 8 \text{ hrs})]$$

where E = SO₂ emission rate (lbs/hr);

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the no. of shifts shall be determined by the record keeping as specified in Section III.4.;
and

the ton flake fed/day shall be determined by the record keeping as specified in Section III.3.

The ton per year limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

If required, the permittee shall determine compliance with this emission limitation through emissions tests performed in accordance with OAC rule 3745-18-04(A) using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 6, 6C or 8. If applicable, alternative U.S. EPA test methods may be used with prior approval from the Ohio EPA.

- d. Emission Limitation:
17.86 lbs CO/hr, 78.23 tons CO/yr

Applicable Compliance Method:

Compliance with the hourly CO limitation shall be determined from the following equation, based upon emission factors developed by the permittee from the emission stack test conducted on June 15, 2001:

$$E = (10.775 \text{ lbs CO/ton flake fed}) \times (\text{ton flake fed/day}) \times [1 \text{ day}/(\text{no. of shifts} \times 8 \text{ hrs})]$$

where E = CO emission rate (lbs/hr);

the no. of shifts shall be determined by the record keeping as specified in Section III.4.;
and

the ton flake fed/day shall be determined by the record keeping as specified in Section III.3.

The ton per year limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

If required, the permittee shall determine compliance with this emission limitation through

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

- e. Emission Limitation:
0.70 lb VOC/hr, 3.07 tons VOC/yr

Applicable Compliance Method:

Compliance with the hourly VOC limitation shall be determined from the following equation, based upon emission factors developed by the permittee from the emission stack test conducted on June 15, 2001:

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$$E = (0.483 \text{ lbs VOC/ton flake fed}) \times (\text{ton flake fed/day}) \times [1 \text{ day}/(\text{no. of shifts} \times 8 \text{ hrs})]$$

where E = VOC emission rate (lbs/hr);

the no. of shifts shall be determined by the record keeping as specified in Section III.4.; and

the ton flake fed/day shall be determined by the record keeping as specified in Section III.3.

The ton per year limitation was developed by multiplying the pound per hour limitation by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

If required, the permittee shall determine compliance with this emission limitation through emissions tests performed in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 25, 25A or 25B. If applicable, alternative U.S. EPA test methods may be used with prior approval from the Ohio EPA.

- 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).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P018 - Modified new flexible graphite material treatment system. Company identification is East Material Treatment System.		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

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None