



State of Ohio Environmental Protection Agency

Street Address:

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

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

Mailing Address:

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

07/22/99

**CERTIFIED MAIL**

**RE: Draft Title V Chapter 3745-77 permit**

02-04-01-0003  
Elkem Metals Company  
Stephan M. Dopuch  
2700 Lake Road East  
P.O. Box 40  
Ashtabula, OH 44005

Dear Stephan M. Dopuch:

You are hereby notified that the Ohio Environmental Protection Agency has prepared the enclosed draft of the Title V permit for the facility referenced above. The purpose of this draft is to solicit public comments. A public notice concerning the draft will appear in the Ohio EPA Weekly Review and the major newspaper in the county where the facility is located. Comments and/or a request for a public hearing from the public and any affected parties will be accepted by Northeast District Office within 30 days of the date of publication in the newspaper. You will be notified in writing if a public hearing is scheduled.

A decision on processing the Title V permit will be made after consideration of written public comments and oral testimony (if a public hearing is conducted). After the comment period, you will be provided with a Preliminary Proposed Title V permit and an opportunity to comment prior to the Proposed Title V permit submittal to USEPA.

**If you have any questions or comments concerning this draft Title V permit, please contact Northeast District Office.**

Very truly yours,

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

cc: USEPA (electronic)  
Jim Orlemann, DAPC Engineering  
Michael Ahern, DAPC PMU  
Northeast District Office  
Pennsylvania  
New York



## Ohio EPA

State of Ohio Environmental Protection Agency

### TITLE V PERMIT

Issue Date: 07/22/99

### DRAFT

Effective Date:

Expiration Date:

This document constitutes issuance to:

Elkem Metals Company  
2700 Lake Road East  
Ashtabula, OH 44005

of a Title V permit for Facility ID: 02-04-01-0003

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

F001 (Roads & Park Areas)  
Paved and unpaved plant roadways and parking areas.

P001 (C1P Calc Carb Pack)  
Calcium Carbide crushing, sizing and packaging consisting of crushers, conveyors and elevators.

P006 (N Coke Handling)  
North Coke Handling system consists of bins, crusher and conveyors.

P008 (Lime Size/Store/Ship)  
Lime Sizing, Storing and Shipping at Building 131, which includes a crusher, screens, conveyors and storage bins.

P009 (Lime Kiln #3)  
Production of metallurgical lime with a vertical lime kiln.

P010 (Lime Kiln #2)  
Production of metallurgical lime with a vertical lime kiln.

P025 (S Coke Dry/Hand)  
South Coke Drying System consisting of a rotary dryer, bins, crusher and conveyors.

P027 (Carbide Mix FeedSys)  
Carbide Lime Mix, Building 10X, includes conveyors, screens, crusher and bins.

P905 (Furnace #13)  
Electric submerged arc furnace used for the production of calcium carbide with feed system.

P906 (Furnace #14)

Electric submerged arc furnace used for the production of calcium carbide with feed system.

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-04(A) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

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

Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087  
(330) 425-9171

## OHIO ENVIRONMENTAL PROTECTION AGENCY

---

Christopher Jones  
Director

# **PART I - GENERAL TERMS AND CONDITIONS**

## **A. State and Federally Enforceable Section**

### **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 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 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 promptly made to the appropriate Ohio EPA District Office or local air agency. These quarterly written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations except malfunctions, which shall be reported in accordance with OAC rule 3745-15-06. 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. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.) See B.8 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. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, recordkeeping, and reporting

requirements. 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 submitted pursuant to OAC rule 3745-15-06 shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of deviations caused by malfunctions or upsets.

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.

#### **8. Marketable Permit Programs**

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

#### **9. Reasonably Anticipated Operating Scenarios**

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

#### **10. Reopening for Cause**

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

- a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

## **11. Federal and State Enforceability**

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

## **12. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
    - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
  - d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the appropriate Ohio EPA District Office or local air agency in the following manner and with the following content:
    - i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
    - ii. Compliance certifications shall include the following:
      - (a) An identification of each term or condition of this permit that is the basis of the certification.
      - (b) The permittee's current compliance status.
      - (c) Whether compliance was continuous or intermittent.
      - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
      - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
    - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

### **13. Permit Shield**

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

### **14. Operational Flexibility**

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

EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

## **15. Emergencies**

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

## **16. Off Permit Changes**

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

- a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition;
- b. The permittee provides contemporaneous written notice of the change to the director and the administrator, except that no such notice shall be required for changes that qualify as insignificant emission levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change;
- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F);
- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes; and
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

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

(For further clarification, the permittee can refer to Engineering Guide #63 that is available in their STARSHIP software package.)

## **17. Compliance Method Requirements**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any

defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

## **B. State Only Enforceable Section**

### **1. Permit to Install Requirement**

Prior to the “installation” or “modification” of any “air contaminant source,” as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

### **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 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 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. Records Retention Requirements**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

### **4. Inspections and Information Requests**

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

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. 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.

**7. 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.

**8. 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.

## **Part II - Specific Facility Terms and Conditions**

### **A. State and Federally Enforcable Section**

**None**

### **B. State Only Enforceable Section**

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

- F002 - Storage Piles
- F006 - Limestone Unloading
- P026 - Lime Handling
- P028 - Zorvex (Process)
- P030 - Calcium Carbide Fine Grinding
- T002 - 12,000-gallon storage tank for diesel
- T005 - 6,000-gallon storage tank for light oil
- T007 - 1,000-gallon storage tank for diesel
- T008 - 500-gallon storage tank for unleaded gasoline
- T009 - 2,000-gallon storage tank for waste oil
- T010 - 2,000-gallon storage tank for diesel
- Z003 - Heaters, < 10 MMBtu/hr
- Z004 - Lab Equipment
- Z009 - Maintenance Parts Cleaning
- Z010 - Round House Parts Cleaning
- Z011 - Mobile Repair Parts Cleaning
- Z015 - 10 Pound Can Line (Calcium Carbide Packaging)
- Z016 - (55-gallon) Drum Line (Calcium Carbide Packaging)

Each insignificant emissions unit at this facility must comply with all State and federal regulations, as well as any emissions limitations and/or control requirements contained within a Permit to Install for the emissions unit.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Roads & Park Areas (F001)**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Roads & Park Areas (F001)

**Activity Description:** Paved and unpaved plant roadways and parking areas.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
paved roadways and parking areas	OAC rule 3745-17-07(B)(4)	There shall be no visible particulate emissions except for a period of time not to exceed 6 minutes during any 60-minute period.
	OAC rule 3745-17-08(B), (B)(8), (B)(9)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed (see Sections A.I.2.a., A.I.2.c., A.I.2.e., A.I.2.f. and A.I.2.g.).
unpaved roadways	OAC rule 3745-17-07 (B)(5)	There shall be no visible particulate emissions except for a period of time not to exceed 13 minutes during any 60-minute period.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Roads & Park Areas (F001)**

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

OAC rule 3745-17-08(B), (B)(2)

Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed (see Sections A.1.2.b. through A.1.2.d., A.1.2.f. and A.1.2.g.).

**2. Additional Terms and Conditions**

- 2.a** The permittee shall employ reasonably available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and parking areas by watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.b** The permittee shall employ reasonably available control measures on all unpaved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.c** The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved or unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
- 2.d** Any unpaved roadway, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway that takes the characteristics of a paved roadway due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.
- 2.e** The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Roads & Park Areas (F001)**

## 2. Additional Terms and Conditions (continued)

- 2.f Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.
- 2.g Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

## II. Operational Restrictions

- 1. The use of used oil as a dust suppressant is prohibited per OAC rule 3745-279-82.
- 2. The permittee shall certify or possess certification that all waste material used to control fugitive dust meets the PCB limitations set forth in 40 CFR 761, and that there are no listed hazardous wastes or characteristic hazardous wastes as set forth in 40 CFR 261.

## III. Monitoring and/or Record Keeping Requirements

- 1. Except as otherwise provided in this section, the permittee shall perform inspections of the roadways and parking areas in accordance with the following frequencies:

roadway/parking area surface type	minimum inspection frequency
paved	daily
unpaved	daily

- 2. The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
- 3. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

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

4. The permittee shall maintain records of the following information:
  - a. the road surface type;
  - b. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
  - c. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
  - d. the dates the control measures were implemented; and
  - e. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in Section A.III.4.e. shall be kept separately for (i) the paved roadways and paved parking areas and (ii) the unpaved roadways, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

### **IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify any of the following occurrences:
  - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
  - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

### **V. Testing Requirements**

1. Compliance with the emissions limitation(s) in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods(s):

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Roads & Park Areas (F001)**

## **V. Testing Requirements (continued)**

- 1.a** Emission Limitation: No visible particulate emissions except for six minutes during any 60-minute period from the paved roadways and parking areas.

Applicable Compliance Method: Compliance with the visible emission limitations for the paved roadways and parking areas identified above shall be determined in accordance with Test Method 22 as set forth in Appendix A on Test Methods in 40 CFR, Part 60 (Standards of Performance for New Stationary Sources), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

- 1.b** Emission Limitation: No visible particulate emissions except for thirteen minutes during any 60-minute period from the unpaved roadways.

Applicable Compliance Method: Compliance with the visible emission limitations for the paved roadways and parking areas identified above shall be determined in accordance with Test Method 22 as set forth in Appendix A on Test Methods in 40 CFR, Part 60 (Standards of Performance for New Stationary Sources), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

**None**

**III. Monitoring and/or Record Keeping Requirements**

**None**

**IV. Reporting Requirements**

**None**

**V. Testing Requirements**

**None**

**VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **C1P Calc Carb Pack (P001)**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** C1P Calc Carb Pack (P001)

**Activity Description:** Calcium Carbide crushing, sizing and packaging consisting of crushers, conveyors and elevators.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
2 Crushers, 3 screens, conveyors, elevators, 6 loading stations, and a multiple cyclone and baghouse for dust control	OAC rule 3745-17-07(A)	Visible particulate emissions from this emissions unit shall not exceed 20% as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 42.6 lbs/hr.

##### 2. Additional Terms and Conditions

None

##### II. Operational Restrictions

1. The pressure drop across the baghouse (C001BAG) shall be maintained within the range of 3.0 - 6.0 inches of water while the emissions unit is in operation.

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain a weekly inspection log of the the physical integrity of the multiple cyclone system (C001CYCS).
2. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse, (C001BAG), 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 baghouse as well as within each compartment on a once per eight-hour shift basis.

### IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified in Section A.II.1.

### V. Testing Requirements

1. Compliance with the emissions limitation(s) in section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - 1.a Emission Limitation: 20% opacity of visible particulate emissions  
  
Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).
  - 1.b Emission Limitation: 42.6 lbs PE/hr  
  
Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-17-03(B)(10).
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - 2.a The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit renewal.
  - 2.b The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate matter.
  - 2.c The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate matter, Method 5 of 40 CFR Part 60, Appendix A.
  - 2.d The following test method(s) shall be employed to demonstrate compliance with the visible particulate emission limit(s): for opacity, Method 9 of 40 CFR Part 60, Appendix A.
  - 2.e The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **C1P Calc Carb Pack (P001)**

#### **V. Testing Requirements (continued)**

3. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Offices refusal to accept the results of the emission test(s).
4. Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
5. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

#### **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
---	---	--

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - Terms and Conditions for Emissions Units**

**Emissions Unit ID:** N Coke Handling (P006)

**Activity Description:** North Coke Handling system consists of bins, crusher and conveyors.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
1 crusher, screens, conveyors, elevators and a baghouse for dust control	OAC rule 3745-17-07(A)	Visible particulate emissions from this emissions unit shall not exceed 20% as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 30.5 lbs/hr.

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

1. The pressure drop across the baghouse (C006&25DUSTEX) shall be maintained within the range of 4.0 - 6.0 inches of water while the emissions unit is in operation.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **N Coke Handling (P006)**

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse, (C006&25DUSTEX), 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 baghouse as well as within each compartment on a once per eight-hour shift basis.

### IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified in Section A.II.1.

### V. Testing Requirements

1. Compliance with the emissions limitation(s) in section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):

- 1.a Emission Limitation: 20% opacity of visible particulate emissions

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation: 30.5 lbs PE/hr

Applicable Compliance Method(s): To determine the actual worst case emission rate for particulate matter, the following equation shall be used:

$$EH = Q \times 528 / (Ta + 460) \times (PE \text{ grain load}) \times (1 \text{ lb PE} / 7000 \text{ grain PE}) \times (60 \text{ min/hr}).$$

Where the following applies:

EH = PE emissions, in pounds per hour.

Q = baghouse exhaust flow, which is 42,000 acfm as noted in the permit application.

PE grain load = maximum particulate emission load from baghouse, which is 0.02 grains PE/dscf per manufacturer's guarantee.

Ta = actual (maximum) stack temperature, 50 degrees Fahrenheit as noted in the permit application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

### VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

**None**

**III. Monitoring and/or Record Keeping Requirements**

**None**

**IV. Reporting Requirements**

**None**

**V. Testing Requirements**

**None**

**VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Lime Size/Store/Ship (P008)**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Lime Size/Store/Ship (P008)

**Activity Description:** Lime Sizing, Storing and Shipping at Building 131, which includes a crusher, screens, conveyors and storage bins.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
1 Crusher, 1 screen, 1 hammermill, conveyors, 3 loading stations, and a baghouse for dust control	OAC rule 3745-17-07(A)	Visible particulate emissions from this emissions unit shall not exceed 20% as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 46.3 lbs/hr.

##### 2. Additional Terms and Conditions

None

##### II. Operational Restrictions

1. The pressure drop across the baghouse (C008BAG) shall be maintained within the range of 4.0 - 6.0 inches of water while the emissions unit is in operation.

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse, (C008BAG), 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 baghouse as well as within each compartment on a once per eight-hour shift basis.

### IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified in Section A.II.1.

### V. Testing Requirements

1. Compliance with the emissions limitation(s) in section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):

- 1.a Emission Limitation: 20% opacity of visible particulate emissions

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation: 46.3 lbs PE/hr

Applicable Compliance Method(s): To determine the actual worst case emission rate for particulate matter, the following equation shall be used:

$$EH = Q \times 528 / (Ta + 460) \times (PE \text{ grain load}) \times (1 \text{ lb PE} / 7000 \text{ grain PE}) \times (60 \text{ min/hr}).$$

Where the following applies:

EH = PE, in pounds per hour.

Q = baghouse exhaust flow, which is 25,000 acfm as noted in the permit application.

PM grain load = maximum particulate load from baghouse, which is 0.02 grains PE/dscf per manufacturer's guarantee.

Ta = actual stack temperature, 50 degrees Fahrenheit as noted in the permit application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

### VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

**None**

**III. Monitoring and/or Record Keeping Requirements**

**None**

**IV. Reporting Requirements**

**None**

**V. Testing Requirements**

**None**

**VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Lime Kiln #3 (P009)**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Lime Kiln #3 (P009)

**Activity Description:** Production of metallurgical lime with a vertical lime kiln.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Lime kiln #3, fueled by natural gas and/or furnace exhaust gas, with a venturi scrubber to control particulate matter emissions	OAC rule 3745-17-07(A)	Visible particulate emissions from this emissions unit shall not exceed 20% as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 42.6 lbs/hr.
	OAC rule 3745-18-10(H)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 126 lbs/hr.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Lime Kiln #3 (P009)**

## **2. Additional Terms and Conditions**

**None**

## **II. Operational Restrictions**

1. Particulate emissions from kilns no. 3 (P009) and no. 2 (P010) are controlled by a single venturi scrubber system capable of controlling only one kiln at a time. Therefore, both P009 and P010 shall not be operated simultaneously.
2. The pressure drop across the scrubber shall be continuously maintained within the range of 15 - 28 inches of water at all times while the emissions unit is in operation.

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall collect and record the pressure drop across the scrubber, in inches of water, on a once per shift basis.

## **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the static pressure drop across the scrubber was not maintained within the range specified in Section A.II.2.

## **V. Testing Requirements**

1. Compliance with the emissions limitation(s) in section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - 1.a Emission Limitation: 20% opacity of visible particulate emissions  
  
Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).
  - 1.b Emission Limitation: 42.6 lbs PE/hr  
  
Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-17-03(B)(10).
  - 1.c Emission Limitation: 126 lbs SO<sub>2</sub>/hr  
  
Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-18-04(A).
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Lime Kiln #3 (P009)**

## **V. Testing Requirements (continued)**

- 2.a** The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit renewal.
- 2.b** The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulate matter and for sulfur dioxide.
- 2.c** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate matter, Method 5 of 40 CFR Part 60, Appendix A; and for sulfur dioxide, Method 6 of 40 CFR Part 60, Appendix A.
- 2.d** The following test method(s) shall be employed to demonstrate compliance with the visible particulate emission limit(s): for opacity, Method 9 of 40 CFR Part 60, Appendix A.
- 2.e** The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
- 3.** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Offices refusal to accept the results of the emission test(s).
- 4.** Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- 5.** A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

## **VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Lime Kiln #3 (P009)**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

**None**

**III. Monitoring and/or Record Keeping Requirements**

**None**

**IV. Reporting Requirements**

**None**

**V. Testing Requirements**

**None**

**VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Lime Kiln #2 (P010)**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Lime Kiln #2 (P010)

**Activity Description:** Production of metallurgical lime with a vertical lime kiln.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Lime kiln #2, fueled by natural gas and/or furnace exhaust gas, with a venturi scrubber to control particulate matter emissions	OAC rule 3745-17-07(A)	Visible particulate emissions from this emissions unit shall not exceed 20% as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 42.6 lbs/hr.
	OAC rule 3745-18-10(H)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 126 lbs/hr.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Lime Kiln #2 (P010)**

## **2. Additional Terms and Conditions**

**None**

### **II. Operational Restrictions**

1. Particulate emissions from kilns no. 3 (P009) and no. 2 (P010) are controlled by a single venturi scrubber system capable of controlling only one kiln at a time. Therefore, both P009 and P010 shall not be operated simultaneously.
2. The pressure drop across the scrubber shall be continuously maintained within the range of 15 - 28 inches of water at all times while the emissions unit is in operation.

### **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall collect and record the pressure drop across the scrubber, in inches of water, on a once per shift basis.

### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the static pressure drop across the scrubber was not maintained within the range specified in Section A.II.2.

### **V. Testing Requirements**

1. Compliance with the emissions limitation(s) in section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):

- 1.a Emission Limitation: 20% opacity of visible particulate emissions

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation: 42.6 lbs PE/hr

Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-17-03(B)(10).

- 1.c Emission Limitation: 126 lbs SO<sub>2</sub>/hr

Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-18-04(A).

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

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Lime Kiln #2 (P010)**

## **V. Testing Requirements (continued)**

- 2.a** The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit renewal.
- 2.b** The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulate matter and for sulfur dioxide.
- 2.c** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate matter, Method 5 of 40 CFR Part 60, Appendix A; and for sulfur dioxide, Method 6 of 40 CFR Part 60, Appendix A.
- 2.d** The following test method(s) shall be employed to demonstrate compliance with the visible particulate emission limit(s): for opacity, Method 9 of 40 CFR Part 60, Appendix A.
- 2.e** The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
- 3.** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Offices refusal to accept the results of the emission test(s).
- 4.** Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- 5.** A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

## **VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Lime Kiln #2 (P010)**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

**None**

**III. Monitoring and/or Record Keeping Requirements**

**None**

**IV. Reporting Requirements**

**None**

**V. Testing Requirements**

**None**

**VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **S Coke Dry/Hand (P025)**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** S Coke Dry/Hand (P025)

**Activity Description:** South Coke Drying System consisting of a rotary dryer, bins, crusher and conveyors.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
1 crusher, screens, conveyors, elevators and a baghouse for dust control; a coke dryer, fired with natural gas or furnace exhaust gas, and 3 cyclones and a baghouse for dust control	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack egress point at this emissions unit shall not exceed 20% as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from all egress points shall not exceed 30.5 lbs/hr.
	OAC rule 3745-18-06(D)(2)	Sulfur dioxide (SO <sub>2</sub> ) emissions from the dryer operation shall not exceed 223 lbs/hr.

##### 2. Additional Terms and Conditions

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **S Coke Dry/Hand (P025)**

## **II. Operational Restrictions**

1. The pressure drop across the baghouse (C006&25DUSTEX) for the crushing and handling operations shall be maintained within the range of 4.0 - 6.0 inches of water while the emissions unit is in operation.
2. The pressure drop across the baghouse (C025DUSTEX) for the drying operation shall be maintained within the range of 4.0 - 6.0 inches of water while the emissions unit is in operation.

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse for the crushing and handling operations, (C006&25DUSTEX), 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 baghouse as well as within each compartment on a once per eight-hour shift basis.
2. The permittee shall maintain a weekly inspection log of the physical integrity of the three cyclone systems for the drying operation (C025CYC1, C025CYC2 and C025CYC3).
3. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse for the drying operation, (C025DUSTEX), 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 baghouse as well as within each compartment on a once per eight-hour shift basis.

## **IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse (C006&25DUSTEX) did not comply with the allowable range specified in Section A.II.1.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse (C025DUSTEX) did not comply with the allowable range specified in Section A.II.2.

## **V. Testing Requirements**

1. Compliance with the emissions limitation(s) in section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - 1.a Emission Limitation: 20% opacity of visible particulate emissions

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

**V. Testing Requirements (continued)**

- 1.b** Emission Limitation: 30.5 lbs PE/hr  
Applicable Compliance Method(s): Compliance shall be determined based upon the following:  
Determination of the actual worst case emission rate for particulate matter from the unloading, conveying and crushing operations:

$$EHh = Q \times 528 / (Ta + 460) \times (\text{PE grain load}) \times (1 \text{ lb PE} / 7000 \text{ grain PE}) \times (60 \text{ min/hr}).$$

Where the following applies:

EHh = PE from handling operations, in pounds per hour.

Q = baghouse exhaust flow, which is 42,000 acfm as noted in the permit application.

PE grain load = maximum particulate load from baghouse, which is 0.02 grains PM/dscf per manufacturer's guarantee.

Ta = actual (maximum) stack temperature, 50 degrees Fahrenheit as noted in the permit application.

- 1.c** Determination of the actual worst case emission rate for particulate matter from the drying operations:

$$EHd = Q \times 528 / (Ta + 460) \times (\text{PE grain load}) \times (1 \text{ lb PE} / 7000 \text{ grain PE}) \times (60 \text{ min/hr}).$$

Where the following applies:

EHD = PE from the drying operation, in pounds per hour.

Q = baghouse exhaust flow, which is 23,700 acfm as noted in the permit application.

PE grain load = maximum particulate load from baghouse, which is 0.02 grains PM/dscf per manufacturer's guarantee.

Ta = actual (maximum) stack temperature, 250 degrees Fahrenheit as noted in the permit application.

- 1.d** Determination of total, actual worst case emission rate (EHT) for PE:

$$EHT = EHh + EHD$$

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **S Coke Dry/Hand (P025)**

## **V. Testing Requirements (continued)**

**1.e** Emission Limitation: 223 lbs SO<sub>2</sub>/hr

Applicable Compliance Method(s): To determine the actual worst case emission rate for sulfur dioxide from the drying operation the following equation shall be used:

$$EHd = P \times EFd$$

EHd = SO<sub>2</sub> emissions from drying operations, in pounds per hour.

P = maximum production rate, in tons per hour, which is 20 tons per hour as noted in the permit application.

EFd = emission factor for uncontrolled SO<sub>2</sub> emissions from the drying operations, which is 3 pounds of uncontrolled SO<sub>2</sub> emissions per ton material processed, based on AIRS data.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 6 or equivalent, alternative methods (as approved by Ohio EPA).

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

**None**

**III. Monitoring and/or Record Keeping Requirements**

**None**

**IV. Reporting Requirements**

**None**

**V. Testing Requirements**

**None**

**VI. Miscellaneous Requirements**

**None**

**Part III - Terms and Conditions for Emissions Units**

**Emissions Unit ID:** Carbide Mix FeedSys (P027)

**Activity Description:** Carbide Lime Mix, Building 10X, includes conveyors, screens, crusher and bins.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Lime conveying and screening operations with a baghouse (C027SLY4), lime conveying and truck loading operations with a cyclone (C027CYC), lime conveying and weighing operations with a baghouse (CO27SLY3), coke hopper and weighing operation with a baghouse (CO27SLY4), and coke conveying/transfer operations and coke/lime mix operations with a baghouse (C027BAG5).	OAC rule 3745-17-07(A)	Visible particulate emissions from this emissions unit shall not exceed 20% as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 46.3 lbs/hr.

**2. Additional Terms and Conditions**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Carbide Mix FeedSys (P027)**

## **II. Operational Restrictions**

1. The pressure drop across the baghouse (C027SLY4) for the lime conveying and screening operations and for the coke hopper and weighing operation shall be maintained within the range of 2.0 - 4.0 inches of water while the emissions unit is in operation.
2. The pressure drop across the baghouse (C027SLY3) for the lime conveying and weighing operations shall be maintained within the range of 2.0 - 4.0 inches of water while the emissions unit is in operation.
3. The pressure drop across the baghouse (C027BAG5) for coke conveying/transfer operations and coke/lime mix operations shall be maintained within the range of 4.0 - 6.0 inches of water while the emissions unit is in operation.

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse (C027SLY4) for the lime conveying and screening operations and for the coke hopper and weighing operation 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 baghouse as well as within each compartment on a once per eight-hour shift basis.
2. The permittee shall maintain a weekly inspection log of the the physical integrity of the cyclone system (C027CYC) for the lime conveying and truck loading operations.
3. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse (C027SLY3) for the lime conveying and weighing operations 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 baghouse as well as within each compartment on a once per eight-hour shift basis.
4. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse (C027BAG5) for the coke conveying/transfer operations and the coke/lime mix operations 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 baghouse as well as within each compartment on a once per eight-hour shift basis.

## **IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse (C027SLY4) did not comply with the allowable range specified in Section A.II.1.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Carbide Mix FeedSys (P027)**

#### **IV. Reporting Requirements (continued)**

2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse (C027SLY3) did not comply with the allowable range specified in Section A.II.2.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse (C027BAG5) did not comply with the allowable range specified in Section A.II.3.

#### **V. Testing Requirements**

1. Compliance with the emissions limitation(s) in Section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):

- 1.a Emission Limitation: 20% opacity of visible particulate emissions

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

1.b Emission Limitation: 46.3 lbs PE/hr

Applicable Compliance Method(s): Compliance shall be determined based upon the following:

Determination of the actual worst case emission rate for particulate matter from the lime conveying & transferring operations, lime screening operations, and the coke hopper and weighing operation, (EH4):

$$EH4 = \{[PL \times (EF_{ct} + EF_s)] + (PC \times EF_t)\} \times (1 - CE_{C027SLY4}).$$

Where the following applies:

EH4 = PE from baghouse, C027SLY4, in pounds per hour.

PL = maximum lime throughput rate, in tons per hour, which is 10 tons per hour as noted in the permit application.

EF<sub>ct</sub> = emission factor for uncontrolled PE from the lime conveying and transfer operations, which is 2.2 pounds of uncontrolled PE per ton material processed, as noted in Table 11.17-4 in Section 11.17 of AP-42.

EF<sub>s</sub> = emission factor for uncontrolled PE from the lime screening operations, which is 0.032 pounds of uncontrolled PE emissions per ton material processed, based on Table 11.19.2-2 in section 11.19.2 of AP-42.

PC = maximum coke throughput rate, in tons per hour, which is 10 tons per hour as noted in the permit application.

EF<sub>t</sub> = emission factor for uncontrolled PE from the coke weighing and transfer operations, which is 0.0765 pounds of uncontrolled PE per ton material processed, as noted in Table 2.1.3-2 of Reasonable Available Control Measures for Fugitive Dust (RACM), Ohio EPA, Sept., 1980.

CE\_C027SLY4 = control efficiency of PE control device, which is 99% as noted in the permit application.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Carbide Mix FeedSys (P027)**

## V. Testing Requirements (continued)

- 1.c** Determination of the actual worst case emission rate for particulate matter from the lime conveying and truck loading operations, (EHCYC):

$$\text{EHCYC} = \text{PL} \times (\text{EFct} + \text{EFI}) \times (1 - \text{CE\_C027CYC}).$$

Where the following applies:

EHCYC = PE from cyclone, C027CYC, in pounds per hour.

PL = maximum lime throughput rate, in tons per hour, which is 10 tons per hour as noted in the permit application.

EFct = emission factor for uncontrolled PE from the lime conveying and transfer operations, which is 2.2 pounds of uncontrolled PE per ton material processed, as noted in Table 11.17-4 in Section 11.17 of AP-42.

EFI = emission factor for uncontrolled PE from the lime open truck loading operations, which is 1.5 pounds of uncontrolled PE per ton material processed, as noted in Table 11.17-4 in Section 11.17 of AP-42.

CE\_C027CYC = control efficiency of PE control device(s), which is 80% as noted in the permit application.

- 1.d** Determination of the actual worst case emission rate for particulate matter from the lime conveying and transfer operations, (EH3):

$$\text{EH3} = \text{PL} \times \text{EFct} \times \text{Nt} \times (1 - \text{CE\_C027SLY3}).$$

Where the following applies:

EH3 = PE from baghouse, C027SLY3, in pounds per hour.

PL = maximum lime throughput rate, in tons per hour, which is 10 tons per hour as noted in the permit application.

EFct = emission factor for uncontrolled PE from the lime conveying and transfer operations, which is 2.2 pounds of uncontrolled PE per ton material processed, as noted in Table 11.17-4 in Section 11.17 of AP-42.

Nt = number of transfer points, which is 5 as noted in the permit application.

CE\_C027SLY3 = control efficiency of PE control device, which is 99% as noted in the permit application.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Carbide Mix FeedSys (P027)**

## V. Testing Requirements (continued)

- 1.e** Determination of the actual worst case emission rate for particulate matter from the coke conveying and transfer operations, and the coke & lime mixing operations, (EH5):

$$EH5 = [(PC \times EF_{ct} \times Nt) + (PCL \times EF_{mix})] \times (1 - CE_{C027BAG5}).$$

Where the following applies:

EH5 = PE from baghouse, C027BAG5, in pounds per hour.

PC = maximum coke throughput rate, in tons per hour, which is 10 tons per hour as noted in the permit application.

EF<sub>ct</sub> = emission factor for uncontrolled PE from the coke conveying and transfer operations, which is 0.0765 pounds of uncontrolled PE per ton material processed, as noted in Table 2.1.3-2 of RACM.

Nt = number of transfer points, which is 5 as noted in the permit application.

PCL = maximum coke and lime mix production rate, in tons per hour, which is 20 tons per hour as noted in the permit application.

EF<sub>mix</sub> = emission factor for uncontrolled PE from the coke and lime mix operations, which is 20 pounds of uncontrolled PE per ton material processed, as noted in Section 6.4 of AP-42.

C027BAG5 = control efficiency of PE control device, which is 99% as noted in the permit application.

- 1.f** Determination of total, actual worst case rate (EHT) for PE:

$$EHT = EH4 + EHCYC + EH3 + EH5.$$

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

**None**

**III. Monitoring and/or Record Keeping Requirements**

**None**

**IV. Reporting Requirements**

**None**

**V. Testing Requirements**

**None**

**VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #13 (P905)**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Furnace #13 (P905)

**Activity Description:** Electric submerged arc furnace used for the production of calcium carbide with feed system.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Feed conveyor operations with a baghouse (C905&6BAG), calcium carbide furnace stack emissions controlled with a tray scrubber system (C905SCRA and CP905SCRB).	OAC rule 3745-17-07(A)	Visible particulate emissions from stack egress points at this emissions unit shall not exceed 20% as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from stack egress points shall not exceed 24.6 lbs/hr.
Calcium carbide furnace #13 fugitive emissions and tapping emissions are controlled with a baghouse (C905&6BAG).	OAC rule 3745-17-07(B)(3)	Visible particulate emissions of fugitive dust from electric arc furnace shop roof monitor(s) shall not exceed 20% opacity as a 3-minute average, except as specified by rule.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #13 (P905)**

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

OAC rule 3745-17-08(B), (B)(3)

Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed (see Sections A.I.2.a. and A.I.2.b.).

OAC rule 3745-18(D)(2)

Sulfur dioxide (SO<sub>2</sub>) emissions from all egress points shall not exceed 180 lbs/hr.

**2. Additional Terms and Conditions**

- 2.a** The permittee shall install and use hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust. Such equipment shall have a collection efficiency that is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.b** Such fugitive dust control equipment shall have an outlet emission rate of no greater than 0.030 grains of particulate matter emissions per dry standard cubic foot of exhaust gases.

**II. Operational Restrictions**

- 1.** The pressure drop across the baghouse (C905&6BAG) shall be maintained within the range of 3.0 - 6.0 inches of water while the emissions unit is in operation.
- 2.** The pressure drop across each of the scrubbers (C905SCRA and C905SCRB) shall be continuously maintained within the range of 5 - 15 inches of water at all times while the emissions unit is in operation.
- 3.** The scrubber water flow rate at each of the scrubbers shall be continuously maintained at a value of not less than 20 gallons per minute at all times while the emissions unit is in operation.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #13 (P905)**

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse, (C905&6BAG), 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 baghouse as well as within each compartment on a once per eight-hour shift basis.
2. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubbers (C905SCRA and C905SCRB) and the scrubber water flow rates while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall collect and record the following information each day:
  - a. The pressure drop across each of the scrubbers, in inches of water, on a once per shift basis.
  - b. The scrubber water flow rate for each of the scrubbers, in gallons per minute, on a once per shift basis.

### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber (C905SCRA and CC905SCRB) parameters were not maintained at or above the required levels:
  - a. The static pressure drop across the scrubber, as specified in Section A.II.2.
  - b. The scrubber water flow rate, as specified in Section A.II.3.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse (C905&6BAG) did not comply with the allowable range specified in Section A.II.1.

### V. Testing Requirements

1. Compliance with the emissions limitation(s) in Section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - 1.a Emission Limitation: 20% opacity of visible particulate emissions from all stack egress points and all fugitive egress points  
  
Applicable Compliance Method: Compliance shall be determined based upon OAC rules 3745-17-03(B)(1) and (B)(3), respectively.
  - 1.b Emission Limitation: 24.6 lbs PE/hr from stack egress points  
  
Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-17-03(B)(10).

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #13 (P905)**

## V. Testing Requirements (continued)

- 1.c** Emission Limitation: 0.030 grains PE/dscf of exhaust gases from fugitive egress points
- Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-17-03(B)(7).
- 1.d** Emission Limitation: 180 lbs SO<sub>2</sub>/hr
- Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-18-04(A).
- 2.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- 2.a** The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit renewal.
- 2.b** The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulate matter and for sulfur dioxide.
- 2.c** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate matter, Method 5 of 40 CFR Part 60, Appendix A; and for sulfur dioxide, Method 6 of 40 CFR Part 60, Appendix A.
- 2.d** The following test method(s) shall be employed to demonstrate compliance with the visible particulate emission limit(s): for opacity, Method 9 of 40 CFR Part 60, Appendix A.
- 2.e** The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
- 3.** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Offices refusal to accept the results of the emission test(s).
- 4.** Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- 5.** A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

Facility Name: **Elkem Metals Company, L.P.**  
Facility ID: **02-04-01-0003**  
Emissions Unit: **Furnace #13 (P905)**

**VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #13 (P905)**

## **B. State Enforceable Section**

### **I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

### **2. Additional Terms and Conditions**

**None**

### **II. Operational Restrictions**

**None**

### **III. Monitoring and/or Record Keeping Requirements**

**None**

### **IV. Reporting Requirements**

**None**

### **V. Testing Requirements**

**None**

### **VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #14 (P906)**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Furnace #14 (P906)

**Activity Description:** Electric submerged arc furnace used for the production of calcium carbide with feed system.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Feed conveyor operations with a baghouse (C905&6BAG), calcium carbide furnace stack emissions controlled with a tray scrubber system (C906SCRA and CP906SCRB).	OAC rule 3745-17-07(A)	Visible particulate emissions from stack egress points at this emissions unit shall not exceed 20% as a 6-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from stack egress points shall not exceed 24.6 lbs/hr.
Calcium carbide furnace #14 fugitive emissions and tapping emissions are controlled with a baghouse (C905&6BAG).	OAC rule 3745-17-07(B)(3)	Visible particulate emissions of fugitive dust from electric arc furnace shop roof monitor(s) shall not exceed 20% opacity as a 3-minute average, except as specified by rule.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #14 (P906)**

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

OAC rule 3745-17-08(B), (B)(3)

Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed (see Sections A.I.2.a. and A.I.2.b.).

OAC rule 3745-18(D)(2)

Sulfur dioxide (SO<sub>2</sub>) emissions from all egress points shall not exceed 180 lbs/hr.

**2. Additional Terms and Conditions**

- 2.a** The permittee shall install and use hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust. Such equipment shall have a collection efficiency that is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.b** Such fugitive dust control equipment shall have an outlet emission rate of no greater than 0.030 grains of particulate matter emissions per dry standard cubic foot of exhaust gases.

**II. Operational Restrictions**

- 1.** The pressure drop across the baghouse (C905&6BAG) shall be maintained within the range of 3.0 - 6.0 inches of water while the emissions unit is in operation.
- 2.** The pressure drop across each of the scrubbers (C906SCRA and C906SCRB) shall be continuously maintained within the range of 5 - 15 inches of water at all times while the emissions unit is in operation.
- 3.** The scrubber water flow rate at each of the scrubbers shall be continuously maintained at a value of not less than 20 gallons per minute at all times while the emissions unit is in operation.

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #14 (P906)**

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse, (C905&6BAG), 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 baghouse as well as within each compartment on a once per eight-hour shift basis.
2. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubbers (C906SCRA and C906SCRB) and the scrubber water flow rates while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall collect and record the following information each day:
  - a. The pressure drop across each of the scrubbers, in inches of water, on a once per shift basis.
  - b. The scrubber water flow rate for each of the scrubbers, in gallons per minute, on a once per shift basis.

### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber (C906SCRA and CC906SCRB) parameters were not maintained at or above the required levels:
  - a. The static pressure drop across the scrubber, as specified in Section A.II.2.
  - b. The scrubber water flow rate, as specified in Section A.II.3.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse (C905&6BAG) did not comply with the allowable range specified in Section A.II.1.

### V. Testing Requirements

1. Compliance with the emissions limitation(s) in Section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - 1.a Emission Limitation: 20% opacity of visible particulate emissions from all stack egress points and all fugitive egress points  
  
Applicable Compliance Method: Compliance shall be determined based upon OAC rules 3745-17-03(B)(1) and (B)(3), respectively.
  - 1.b Emission Limitation: 24.6 lbs PE/hr from stack egress points  
  
Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-17-03(B)(10).

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #14 (P906)**

## V. Testing Requirements (continued)

- 1.c** Emission Limitation: 0.030 grains PE/dscf of exhaust gases from fugitive egress points
- Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-17-03(B)(7).
- 1.d** Emission Limitation: 180 lbs SO<sub>2</sub>/hr
- Applicable Compliance Method: Compliance shall be based upon OAC rule 3745-18-04(A).
- 2.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- 2.a** The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit renewal.
- 2.b** The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulate matter and for sulfur dioxide.
- 2.c** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate matter, Method 5 of 40 CFR Part 60, Appendix A; and for sulfur dioxide, Method 6 of 40 CFR Part 60, Appendix A.
- 2.d** The following test method(s) shall be employed to demonstrate compliance with the visible particulate emission limit(s): for opacity, Method 9 of 40 CFR Part 60, Appendix A.
- 2.e** The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
- 3.** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Offices refusal to accept the results of the emission test(s).
- 4.** Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- 5.** A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

Facility Name: **Elkem Metals Company, L.P.**  
Facility ID: **02-04-01-0003**  
Emissions Unit: **Furnace #14 (P906)**

**VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**

Facility ID: **02-04-01-0003**

Emissions Unit: **Furnace #14 (P906)**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

**None**

**III. Monitoring and/or Record Keeping Requirements**

**None**

**IV. Reporting Requirements**

**None**

**V. Testing Requirements**

**None**

**VI. Miscellaneous Requirements**

**None**

Facility Name: **Elkem Metals Company, L.P.**  
Facility ID: **02-04-01-0003**

\*\*\*\*\*

**THIS IS THE LAST PAGE OF THE PERMIT**

\*\*\*\*\*