PTI 06-4128

OhioEPA

State of Ohio Environmental Protection Agency

STREET ADDRESS:
1800 WaterMark Drive
Columbus, OH 43215-1099

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

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

Re: Permit to Install
Washington County
Application No: 06-4128
TOXIC REVIEW
NETTING

CERTIFIED MAIL

May 3, 1995

ELKEM METALS COMPANY
JOHN R. HUGHES
P.O. BOX 299
MARIETTA, OH 45750

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Board of Review pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Environmental Board of Review within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Board. An appeal may be filed with the Environmental Board of Review at the following address:

Environmental Board of Review
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo

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

cc: US EPA
SOUTHEAST DISTRICT OFFICE, DAPC

State of Ohio Environmental Protection Agency

Permit to Install
Terms and Conditions

Application No. 06-4128
APS Premise No. 0684020006
Permit Fee: $2000.00

Name of Facility: ELKEM METALS COMPANY

Person to Contact: JOHN R. HUGHES

Address: P.O. BOX 299
MARIETTA, OH 45750

Location of proposed source(s): NE CORNER ST RT 7 SOUTH & CO RT 10
MARIETTA/WARREN TWP., OHIO

Description of proposed source(s):
#18 ELECTRIC SUBMERGED ARC FURNACE-MODIFICATION SUPERCEDES A
LL PREVIOUS PTI'S FOR #18 FURNACE.

Date of Issuance: May 3, 1995

Effective Date: May 3, 1995

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Donald R Schregardus

Director

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES(S)

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

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

the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities prove to be inadequate or cannot meet applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

PUBLIC DISCLOSURE

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

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

BEST AVAILABLE TECHNOLOGY

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

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies.

AIR EMISSION SUMMARY

The air contaminant sources listed below comprise the Permit to Install for ELKEM METALS COMPANY located in Washington County. The sources listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

Ohio EPA Source Number	Source Identification Description	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
P909	#18 Electric Submerged Arc Furnace (modification to install electrical components)	See Additional Terms & Conditions; 99.7% control efficiency of the scrubber.	3745-31-05 (A)(3) 3745-17-07 3745-17-11 3745-17-08 (B)(3)	See attached terms and conditions 24.7 lbs/hr PM/PM_{10}

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons/Year
PM/PM_{10}	108.2 (Includes total furnace emissions including modifications. Netting results in a net decrease).

CONSTRUCTION STATUS

The OEPA Southeast District Office - DAPC shall be notified in writing as to (a) the construction starting date, (b) the construction completion date, and (c) the date the facilities were placed into operation for the following source: P909 Electric Arc Furnace.

RECORD(S) RETENTION AND AVAILABILITY

All records required by this Permit to Install shall be retained on file for a period of not less than three years unless otherwise indicated by Ohio Environmental Protection Agency. All records

shall be made available to the Director, or any representative of the Director, for review during normal business hours.

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the OEPA Southeast District Office - DAPC, 2195 Front Street, Logan, Ohio 43138.

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

1. **Allowable Mass Emission Limitation(s) and/or Control Requirements:**

   The allowable mass emission limitation(s) and/or control requirements for the operation(s), equipment and/or property identified above are specified in the following table:

Operation(s), Equipment and/or Property	Allowable Mass Emission Limitation(2) and/or Control Requirements
Furnace Charging & Melting	A continuous draft shall be maintained in the charging and melting area to minimize or eliminate visible emissions of fugitive dust to the extent possible with good engineering judgment, and exhausted to control equipment.
Furnace Tapping	The tapping hood shall have a collection efficiency sufficient to minimize or eliminate visible emissions of fugitive dust at the point of capture to the extent possible with good engineering design, the baghouse shall achieve an outlet particulate emission rate of not greater than 0.030 grains per dry standard cubic foot or there are no visible particulate emissions from the exhaust stacks, whichever is less stringent.
Furnace Total Emissions	Total furnace emissions shall not exceed 24.7 pounds per hour of particulate emissions when producing Std. FeMn.

2. This source must comply with the NESHAP MACT Standard as of the compliance date specified in that standard including any additional extension which may be granted to the source. This condition does not imply that any extensions will be granted.

3. <u>Stack Test Requirements:</u>

Once each whole integer megawatt increase, beginning with 15 megawatts, Elkem shall conduct, or have conducted, an emission test(s) for P909 in order to demonstrate compliance with the allowable mass emission rate for total particulates and PM_{10}. Such test(s) shall include a determination of the uncontrolled mass rate of particulate emissions if it is determined by the

Ohio EPA that uncontrolled testing can be done in a safe and accurate manner. The emission test(s) shall be conducted in accordance with the test methods and procedures specified in OAC rule 3745-17-03 and shall be performed within 30 days of achieving a sustainable new megawatt level. Sustainable is defined as a continuous 30-day average.

Not later than 30 days prior to the proposed test date(s), Elkem Metals shall submit an "Intent to Test" notification to the Ohio EPA Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the source 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 Southeast District Office's refusal to accept the result of the emission test(s).

Personnel from the Ohio EPA's Southeast District Office shall be permitted to witness the test(s), examine the testing equipment and acquire data and information regarding the source operating parameters.

A comprehensive written report on the results of the emission test(s) shall be submitted to the Ohio EPA's Southeast District Office within 30 days following completion of the test(s).

If Elkem can demonstrate to Ohio EPA that it is not possible to conduct testing to determine the uncontrolled rate of emissions from the furnace, including the emissions going to the scrubber, then the requirement for testing the uncontrolled rate may be relaxed. If it is determined by Ohio EPA that the uncontrolled testing cannot be conducted, then uncontrolled emissions will be calculated based on tested controlled emissions and a scrubber efficiency of 99.7%.

4. <u>Ambient Air Monitoring Network:</u>

Elkem Metals shall establish and operate an ambient PM_{10} monitoring network in the vicinity of the plant in Washington County. The location of three monitoring sites shall be based on accepted modeling practice and shall adequately monitor areas of maximum impact of the particulate emissions and the background concentration. Determination of the sampling locations shall be coordinated with, and subject to the prior approval of, the Ohio EPA. Ohio EPA may co-locate monitoring equipment at one of the approved sites. Within one year after the effective date of this permit, Elkem Metals shall submit a plan describing the proposed network. This plan shall provide documentation detailing the criteria and reasoning and, the location of monitoring sites, along with the modeling information.

Following approval of the sampling network plan, 30 days will

be allowed to locate the samplers in accordance with the plan. All samplers shall be sited and located in accordance with the requirements of 40 CFR, Part 58 and any subsequent amendments. The network shall be equipped with PM_{10} samplers meeting the reference methods specified in 40 CFR, Parts 50 and 53 with the additional requirement that each instrument shall be equipped with a continuous flow meter (recording transducer), unless the instrument uses volumetric flow control.

Elkem Metals shall operate one site, specified by Ohio EPA, on an every-other day schedule with the other sites run on the same schedule as the Ohio air sampling network (one day in six) and in accordance with the following requirements:

(a) The operating procedures identified in 40 CFR, Parts 50 and 58 and the "Quality Assurance Handbook for Air Pollution Measurement Systems" Volume I - Principles (EPA-600/9-76-005) and Volume II - Ambient Air Specific Methods (EPA-600-4-77-027a) shall be followed.

(b) The flow rate of each instrument shall be calibrated after every 500 hours of operation and after any instance of major repair or maintenance.

(c) An operator's logbook shall be maintained for each site location with a format as specified in guidance provided by the Ohio EPA.

Elkem Metals shall meet the quality assurance activities specified in 40 CFR, Part 58, Appendix B except that at least one collocated site shall be maintained, which shall be at the site with the highest expected 24-hour pollutant concentration. Independent audit (accuracy) results and precision results must be submitted quarterly to the Technical Services Section of the Ohio EPA, Division of Air Pollution Control in Columbus, and the Ohio EPA Southeast District Office within 45 days after the end of each calendar quarter, beginning with the first quarter of monitor operation. Equipment siting and performance specifications must be in accordance with "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)," (EPA/450/4-80-012).

Personnel from the Technical Services Section, Ohio EPA Southeast District Office, shall be provided with access to each site location. The site operator and/or supervisor shall accompany the Technical Services Section, Ohio EPA Southeast District Office personnel on any site inspection or audit and respond to inquiries regarding instrument operations and maintenance.

Appropriate corrective actions must be taken by Elkem Metals following the identification of any problem by the independent auditor, or personnel from the Technical Services Section, Ohio EPA Southeast District Office.

All air quality measurement data shall be reported to the Technical Services Section of the Ohio EPA, Division of Air Pollution Control in Columbus, within 18 days after the end of each calendar quarter, beginning with the first quarter of monitor operation. All such data shall be submitted on magnetic tape in Aerometric Information Retrieval System (AIRS) format in a manner compatible for direct entry into the Ohio EPA Ambient Air Quality Data Handling System.

This facility shall continue to operate the ambient monitoring network as described in the permit condition through the end of calendar year 2000. The Director may extend the terms of this monitoring requirement. In determining the need for such an extension, the Director shall consider the concentrations measured by the monitors, the trends in air quality concentrations, and the value of the air quality data in fulfilling the goals and requirements of the federal Clean Air Act and Chapter 3704 of the Ohio Revised Code.

5. Tapping Control Study at Renewal:

Elkem Metals shall continue to evaluate new technologies and control strategies for tapping emissions in order to comply with RACM. A comprehensive written report of Elkem's findings shall be included in any renewal application. The RACM determination must be based on current data. Elkem may request assistance from Ohio EPA in this endeavor.