Facility Name: **Magnesium Aluminum Corp.**
Application Number: **13-3449**
Date: **July 14, 1999**

GENERAL PERMIT CONDITIONS

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

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 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 and regulations.

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements

AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Magnesium Aluminum Corp.** located in **Cuyahoga** County. The emissions units 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
P006	3.0 MMBTU/HR Natural Gas Fired Aluminum Melting Furnace	Use of Clean Aluminum #380 Die Cast Alloy visible Emission $\leq$ 5% Opacity	3745-31-05	3.22 lb/hr PM/TSP, 14.1 TPY 1.95 lb/hr PM_{10}, 8.54 TPY 0.87 lb/hr NO_X, 3.81 TPY 0.67 lb/hr SO_2, 2.93 TPY 5% opacity as a six minute average
			3745-17-11	*
			3745-17-07(A)	*

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* This emission limitation is less stringent than the limit established through OAC 3745-31-05.

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons/Year
PM/TSP	14.1
PM_{10}	8.54
NO_X	3.81
SO_2	2.93

CONSTRUCTION STATUS

The **Cleveland Division of the Environment, 1925 St. Clair Avenue, Cleveland, Ohio 44114** 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 sources: **P006 3.0 MMBTU/HR Natural Gas Aluminum Melting 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.

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.

CONSTRUCTION COMPLIANCE CERTIFICATION

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

ADDITIONAL SPECIAL TERMS AND CONDITIONS

A. Operational Restriction

1. The permittee shall utilize only clean aluminum #380 whenever the emissions unit is in operation.

B. Monitoring and RecordKeeping Requirements

1. The permittee shall keep records of hours of operation of this emissions unit.

C. Reporting Requirement

1. None.

D. Testing Requirements

1. Emission Limitation -

   3.22 lb/hr of PM/TSP 14.1 TPY

   Applicable Compliance Method -

   Compliance shall be based upon multiplying the hourly process weight rate of the emissions unit in tons, by the USEPA emission factor of 4.3 lb/ton of PM to arrive at the hourly emission rate. The hourly emission rate is multiplied by the annual operating hours of the emissions unit and divided by 2000 lbs/ton to arrive at the annual emission rate.

2. Emission Limitation -

   1.95 lb/hr of PM/10 8.54 TPY

   Applicable Compliance Method -

   Compliance shall be based upon multiplying the hourly process weight rate of the emissions unit in tons, by the USEPA emission factor of 2.6 lb/ton of PM/10 to arrive at the hourly emission rate. The hourly emission rate is multiplied by the annual operating hours of the emissions unit and divided by 2000 lbs/ton to arrive at the annual emission rate.

3. Emission Limitation -

   0.87 lb/hr of Nox 3.81 TPY

   Applicable Compliance Method -

   Compliance shall be based upon multiplying the maximum hourly heat input capacity of the emissions unit(3.0 MMbtu/hr) by the AP-42 emission factor for NOx (100 lbs NOx/million cubic feet)and dividing by the heat content for natural gas (1 ft^3/1000 btu).

   Compliance shall be based upon multiplying the hourly process weight rate of the emissions unit in tons, by the USEPA emission factor of 2.6 lb/ton of PM/10 to arrive at the hourly emission rate.

   These hourly emission rates for NOx are added and multiplied by the annual operating hours of the emissions unit and divided by 2000 lbs/ton to arrive at the annual emission rate.

4. Emission Limitation -

   0.67 lb/hr of SO2 2.93 TPY

   Applicable Compliance Method -

   Compliance shall be based upon multiplying the hourly process weight rate of the emissions unit in tons, by the USEPA emission factor of 0.9 lb/ton of SO2 to arrive at the hourly emission rate. The hourly emission rate is multiplied by the annual operating hours of the emissions unit and divided by 2000 lbs/ton to arrive at the annual emission rate.

5. Emission Limitation -

5% opacity, as a six-minute average

Applicable Compliance Method(s) -
Compliance shall be determined by visible emission observations performed in accordance with USEPA Reference Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).