



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
Cuyahoga County
Application No: 13-3174
NSPS
CEM
SYNTHETIC MINOR
NETTING

CERTIFIED MAIL

June 20, 1997

ALUMINUM COMPANY OF AMERICA
JAMES V. APICELLA
1600 HARVARD AVE BLDG 152-3
CLEVELAND, OH 44105

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, Manager
Field Operations & Permit Section
Division of Air Pollution Control

cc: US EPA
CLEVELAND AIR POLLUTION CONTROL

George V. Voinovich, Governor
Nancy P. Hollister, Lt. Governor
Donald R. Schregardus, Director



Permit to Install Terms and Conditions

Application No. 13-3174
APS Premise No. 1318170314
Permit Fee: \$2400.00

Name of Facility: ALUMINUM COMPANY OF AMERICA

Person to Contact: JAMES V. APICELLA

Address: 1600 HARVARD AVE BLDG 152-3
CLEVELAND, OH 44105

Location of proposed source(s): 1600 HARVARD AVE
CLEVELAND, OHIO

Description of proposed source(s):
2 GAS/OIL 98.8 MMBTU/HR NEBRASKA BOILERS.

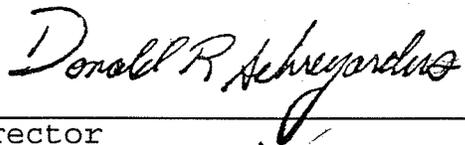
Date of Issuance: June 20, 1997

Effective Date: June 20, 1997

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



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

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

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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 ALUMINUM COMPANY OF AMERICA located in Cuyahoga 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.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
B008	Gas/fuel oil #2 fired boilers rated at 98.8 MMBTU/hr	Gas/fuel oil fired boiler with low NO _x burner	3745-31-05 3745-17-10 (B) (1) 3745-21-08 (B) 3745-17-07 40 CFR 60 Dc	Allowable Mass Emissions: <u>For Fuel Oil #2:</u> NO _x : 19.62 lbs/hr PM ₁₀ : 3.98 lbs/hr CO: 3.68 lbs/hr SO _x : 23.8 lbs/hr Fuel oil shall contain no greater than 0.5 weight percent of sulfur. Maximum fuel oil #2 usage per year is limited to no greater than 1,400,000 gallons per year. <u>For Natural Gas:</u> NO _x : 16.32 lbs/hr PM ₁₀ : 1.98 lbs/hr CO: 4.1 lbs/hr
B009	Gas/fuel oil #2 fired boilers rated at 98.8 MMBTU/hr	Gas/fuel oil fired boiler with low NO _x burner	3745-31-05 3745-17-10 (B) (1) 3745-21-08 (B) 3745-17-07 40 CFR 60 Dc	Allowable Mass Emissions: <u>For Fuel Oil #2:</u> NO _x : 19.62 lbs/hr PM ₁₀ : 3.98 lbs/hr CO: 3.68 lbs/hr SO _x : 23.8 lbs/hr Fuel oil shall contain no greater

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
				than 0.5 weight percent of sulfur.
				Maximum fuel oil #2 usage per year is limited to no greater than 1,400,000 gallons per year.
				<u>For Natural Gas:</u> NO _x : 16.32 lbs/hr PM ₁₀ : 1.98 lbs/hr CO: 4.1 lbs/hr

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
PM ₁₀	7.0
SO ₂	112
NO _x	150
CO	17.9

NSPS REQUIREMENTS

The following sources are subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

<u>Source No.</u>	<u>Source Description</u>	<u>NSPS Regulation (Subpart)</u>
B008 and B009	Gas/fuel oil fired boilers rated at 98.8 MMBTU/hr	40 CFR 60 Dc

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (If required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, OH 43216-3669

and Cleveland Air Pollution Control
1925 St. Clair
Cleveland, Ohio 44114

PERFORMANCE TEST REQUIREMENTS

The permittee shall conduct, or have conducted, performance testing on the air contaminant source(s) in accordance with procedures approved by the Agency. Two copies of the written report describing the test procedures followed and the results of such tests shall be submitted and signed by the person responsible for the test. The Director, or an Ohio EPA representative, shall be allowed to witness the test, examine testing equipment, and require the acquisition or submission of data and information necessary to assure that the source operation and testing procedures provide a valid characterization of the emissions from the source and/or the performance of the control equipment.

- A. A completed Intent to Test form shall be submitted to the appropriate Ohio EPA District Office or Local Air Pollution Control Agency where the original permit application was filed. This notice shall be made 30 days in advance and shall specify the source operating parameters, the proposed test procedures, and the time, date, place and person(s) conducting such tests.
- B. Two copies of the test results shall be submitted within 30 days after the completion of the performance test.
- C. Tests shall be performed for the following source(s) and pollutants(s):

Source

B008 and B009

Pollutants

PM, PM₁₀

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.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to Cleveland Air Pollution Control, 1925 St. Clair, Cleveland, Ohio 44114.

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 Cleveland Air Pollution Control, 1925 St. Clair, Cleveland, Ohio 44114.

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.

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. This permit to install covers the installation of two 98.8 MMBTU per hour natural gas/oiled fired boilers, which use mainly natural gas in order to generate steam for process and space heating. The distillate oil is used as a backup fuel.
- B. These emission units are subject to the Ohio Administrative Code (OAC) Rules 3745-31-05, 3745-17-10, 3745-17-07, 3745-21-08 and the Code of Federal Regulations 40 CFR Part 60 Subpart DC.
- C. In accordance to the Permit-to-Install 13-3174, the mass emissions from each of these units shall not exceed the following allowable limits:

For fuel oil #2:

- | | | |
|----|--------------------|------------------------|
| 1. | NOx | 19.63 pounds per hour. |
| 2. | PM: | 3.98 pounds per hour. |
| 3. | PM ₁₀ : | 3.62 pounds per hour. |
| 4. | CO: | 3.68 pounds per hour. |
| 5. | SO ₂ : | 23.8 pounds per hour. |

(Fuel oil shall contain no greater than 0.5 weight percent of Sulfur.)

Maximum fuel oil #2 usage per year is limited to no greater than shall be limited to 2,918,000 gallons per year.

For natural gas:

- | | | |
|----|--------------------|------------------------|
| 1. | NOx: | 16.32 pounds per hour. |
| 2. | PM: | 1.98 pounds per hour. |
| 3. | PM ₁₀ : | 0.7273 pound per hour. |
| 4. | CO: | 4.1 pounds per hour. |

- D. The owner or operator of these boilers shall fire fuel oil that contains no greater than 0.5 weight percent of Sulfur. A prior approval granted by Ohio Environmental Protection Agency Ohio EPA or its duly authorized agency, is required before any fuel other than the one specified above is fired in these boilers.
- E. The fuel oil sulfur limits apply at all times, including periods of startup, shutdown and malfunction. The facility shall demonstrate compliance with SO₂ standard based on fuel supplier certification. The performance test shall consist of the fuel supplier certification which includes the following information:

1. the name of the oil supplier; and,
 2. the statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 60.41c.
- F. The permittee shall conduct initial compliance test within 180 days after startup for these emissions units in accordance with the following requirements:

1. the emission testing shall be conducted to demonstrate compliance with the particulate allowable mass emission rate(s):

Particulates Methods 5 and 9 of 40 CFR 60, Appendix A.

PM₁₀ U.S. EPA Method 201 or 201A of 40 CFR Part 51, Appendix M. Regulated PM₁₀ emissions shall consist only of the front-half and filter catch of either reference method. U.S. EPA Method 202 or an equivalent method shall be used to determine condensable PM₁₀ emissions for reporting purposes only.

G. Reporting Requirements:

1. The owner or operator shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup. This notification shall include the design heat input capacity of the steam generating unit and identification of fuels to be combusted in the unit.
2. The owner or operator shall submit to the Administrator the performance test data from the initial and any subsequent performance tests.

H. The owner or operator shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

I. In order to "net out" of the Federal Prevention of Significant Deterioration and non-attainment requirements, the applicant shall permanently shutdown the following emissions units located at the Aluminum Company of America's Cleveland Works: B001, B002, B003, B004, and B005 by March 31, 1998, or upon startup (i.e., beginning of normal operation) of the replacement boilers (B008 and B009), and the new emission units, P157 and P158. The shake down period for the

replacement emissions units shall not exceed one hundred eighty days. The following record keeping shall be maintained and quarterly summary reported to the Cleveland Division of Air Pollution showing the following:

1. in all cases, for the operations of the coal fired boilers, the replacement boilers, and the new emission units (P157 and P158), the actual PM₁₀ emission increases shall not exceed a 15 ton per year increase based upon a rolling, 12-month summation of the monthly emissions; and,
2. for months of combined operation prior to shutdown of B001 - B005, the actual PM₁₀ emission increasing during the first 12 months of operation from the aforementioned sources shall not exceed the emissions levels specified in the following table:

<u>Month</u>	<u>Maximum Allowable Cumulative PM₁₀ emissions (tons)</u>
1-6	7.5
7	8.75
8	10.0
9	11.25
10	12.5
11	13.75
12	15.0

After the first 12 calendar months of combined operation prior to shutdown of B001 - B005, compliance with the annual emission limitation for PM₁₀ shall be based upon a rolling, 12-month summation of the monthly emissions. The netting calculations are presented in Ohio EPA Permit to Install No. 13-3149.

- J. The owner and or operator of the boilers shall be limited to 7.0 tons per year of PM₁₀ emissions employing the usage limits in special terms and conditions K. and L. based on the following equation:

$$\frac{7.091 \text{ lbs PM}_{10}}{\text{MM cu. ft.}} \times \frac{X \text{ MM cu. ft. of NG}}{\text{year}} + \frac{0.67 \text{ LBS PM}_{10}}{1000 \text{ lbs of oil}} \times \frac{7.2 \text{ lbs of oil}}{\text{gallons of fuel oil}} \times \frac{Y \text{ gallons of fuel oil}}{\text{year}} = \frac{7.0 \text{ Tons}}{\text{year}}$$

- K. The maximum annual gallon usage of fuel oil for the boilers (B008 and B009) shall not exceed 2,918,000, based upon a rolling, 12-month summation of the gallon usage figures.

To ensure enforceability during the first 12 calendar months of operation of the boilers following the issuance of this permit, the permittee shall not exceed the gallon usage levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Gallon Usage</u>
1-6	1,459,000
1-7	1,702,167
1-8	1,945,333
1-9	2,188,500
1-10	2,431,667
1-11	2,674,833
1-12	2,918,000

After the first 12 calendar months of operation of the boilers following the issuance of this permit, compliance with the annual gallon usage limitation shall be based upon a rolling, 12-month summation of the gallon usage figures.

The permittee shall maintain monthly records of the following information for each of the boilers:

1. the gallon usage of fuel oil; and,
2. beginning after the first 12 calendar months of operation after the issuance of this permit, the rolling, 12-month summation of the gallon usage figures.

Also, during the first 12 calendar months of operation after the issuance of this permit, the permittee of the boilers shall record the cumulative gallon usage for each calendar month.

The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative gallon usage levels.

- L. The maximum annual natural gas usage of the boilers (B008 and B009) shall not exceed 1,974.3 million cubic feet, based upon a rolling, 12-month summation of the natural gas usage figures.

To ensure enforceability during the first 12 calendar months of operation of the boilers following the issuance of this permit, the permittee shall not exceed the natural gas usage levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Natural Gas (MM cu. ft.)</u>
1-6	987.15
1-7	1152
1-8	1316
1-9	1481
1-10	1645
1-11	1810
1-12	1974.3

After the first 12 calendar months of operation of the boilers following the issuance of this permit, compliance with the annual natural gas usage limitation shall be based upon a rolling, 12-month summation of the natural gas usage figures.

The permittee shall maintain monthly records of the following information for each of the boilers:

1. the natural gas usage; and,
2. beginning after the first 12 calendar months of operation after the issuance of this permit, the rolling, 12-month summation of the natural gas usage figures.

Also, during the first 12 calendar months of operation after the issuance of this permit, the permittee of the boilers shall record the cumulative natural gas usage for each calendar month.

The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative natural gas usage levels.

- M. This facility shall notify the Cleveland Division of Air Pollution before any fuel oil is used in these boilers. The facility shall submit to the Cleveland Division of Air Pollution copies of the oil supplier's analyses for each shipment of oil received for burning in these boilers. The oil supplier's analyses shall document the sulfur content (percent) and heat content (BTU/gallon) of each shipment of oil. In addition to records of fuel supplier certifications, a certified statement signed by the owner or operator of the emissions unit that the records of fuel supplier certifications submitted represent all the fuel combusted during the quarter.

The initial quarterly report shall be postmarked by the 30th day of the third month following the completion of the initial quarterly report shall be postmarked by the 30th day following the end of the reporting period and shall cover the oil

shipments received during the previous calendar year. All records shall be maintained by the facility for a minimum period of three years following the date of the initial records.

N. Reporting Requirements Related to Monitoring and Recordkeeping Requirements:

The permittee shall submit any required reports in the following manner:

1. reports of any required monitoring and/or recordkeeping information shall be submitted to the Cleveland Division of Air Pollution; and,
2. except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviation (excursions) from emission limitations, operation, restrictions, and control device operating parameter limitations that have been detected by 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 Cleveland Division of Air Pollution. 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.)

- O. These conditions in no way limit the applicability of other requirements of the Ohio Administrative Code of these units.