

**New York State Department of Environmental Conservation**

**Permit ID: 6-4058-00003/00379**

**Facility DEC ID: 6405800003**



**Permit Under the Environmental Conservation Law (ECL)**

**ARTICLE 19: AIR POLLUTION CONTROL - AIR STATE FACILITY  
PERMIT**

**IDENTIFICATION INFORMATION**

Permit Issued To:ALCOA INC  
201 ISABELLA ST  
PITTSBURGH, PA 15212-5858

Facility: ALCOA MASSENA OPERATIONS (WEST PLANT)  
PARK AVE E  
MASSENA, NY 13662

Authorized Activity By Standard Industrial Classification Code:  
3334 - PRIMARY ALUMINUM  
3354 - ALUMINUM EXTRUDED PRODUCTS  
3355 - ALUMINUM ROLLING & DRAWING NEC

Permit Effective Date: 03/20/2012  
date.

Permit Expiration Date: No expiration



PAGE LOCATION OF CONDITIONS

**PAGE**

**FEDERALLY ENFORCEABLE CONDITIONS**

**Facility Level**

- ~~6~~ ~~1 6 NYCRR 211.1: Air pollution prohibited~~  
6 2 6 NYCRR 249.3 (a): Compliance Demonstration

**Emission Unit Level**

**EU=B-00001**

- 7 3 6 NYCRR 249.3 (a): Compliance Demonstration  
8 4 6 NYCRR 249.3 (a): Compliance Demonstration

**EU=B-00001,Proc=OIL**

- 8 5 6 NYCRR 249.3 (a): Compliance Demonstration

**EU=S-00001,Proc=POT**

- 9 6 6 NYCRR 249.3 (a): Compliance Demonstration  
10 7 6 NYCRR 249.3 (a): Compliance Demonstration

**EU=S-00002,Proc=BAK**

- 11 8 6 NYCRR 249.3 (a): Compliance Demonstration  
11 9 6 NYCRR 249.3 (a): Compliance Demonstration

**STATE ONLY ENFORCEABLE CONDITIONS**

**Facility Level**

- ~~13~~ ~~10 ECL 19-0301: Contaminant List~~  
~~14~~ ~~11 6 NYCRR 201-1.4: Unavoidable noncompliance and violations~~  
15 12 6 NYCRR Subpart 201-5: Emission Unit Definition  
~~16~~ ~~13 6 NYCRR 211.2: Visible Emissions Limited~~  
16 14 6 NYCRR 249.3 (f): Compliance Demonstration

**Emission Unit Level**

- ~~16~~ ~~15 6 NYCRR Subpart 201-5: Process Definition By Emission Unit~~

**EU=B-00001**

- ~~18~~ ~~16 6 NYCRR Subpart 201-5: General Provisions~~

**EU=S-00001**

- ~~18~~ ~~17 6 NYCRR Subpart 201-5: General Provisions~~

**EU=S-00002**

- ~~19~~ ~~18 6 NYCRR Subpart 201-5: General Provisions~~

# New York State Department of Environmental Conservation

Permit ID: 6-4058-00003/00379

Facility DEC ID: 6405800003



~~of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.~~

**Item M: ~~Federally Enforceable Requirements 40 CFR 70.6 (b)~~**

~~All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.~~

## FEDERAL APPLICABLE REQUIREMENTS

The following conditions are federally enforceable.

**Condition 1: ~~Air pollution prohibited~~**  
~~Effective between the dates of 03/20/2012 and Permit Expiration Date~~

~~Applicable Federal Requirement: 6 NYCRR 211.1~~

**Item 1.1:**

~~No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.~~

**Condition 2: ~~Compliance Demonstration~~**  
~~Effective between the dates of 03/20/2012 and Permit Expiration Date~~

~~Applicable Federal Requirement: 6 NYCRR 249.3 (a)~~

**Item 2.1:**

The Compliance Demonstration activity will be performed for the facility:  
The Compliance Demonstration applies to:

Emission Unit: S-00001

**New York State Department of Environmental Conservation**

**Permit ID: 6-4058-00003/00379**

**Facility DEC ID: 6405800003**



Emission Unit: S-00002

Regulated Contaminant(s):

CAS No: 007446-09-5      SULFUR DIOXIDE

**Item 2.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE  
PARAMETERS AS SURROGATE

Monitoring Description:

The specification of % sulfur by weight in the coke used at the plant shall be 2.5% on an annual average basis rolled monthly. This 2.5% limit is approved as the BART limit for sulfur emissions for these two emission units. The sulfur content shall be determined from vendor test data for each lot of coke received for processing. The current annual average and any excursions above the limit shall be reported semiannually on a calendar year basis.

Process Material: COKE

Parameter Monitored: SULFUR CONTENT

Upper Permit Limit: 2.5 percent by weight

Monitoring Frequency: MONTHLY

Averaging Method: AVERAGING METHOD - SEE MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2012.

Subsequent reports are due every 6 calendar month(s).

**\*\*\*\* Emission Unit Level \*\*\*\***

**Condition 3: Compliance Demonstration**

**Effective between the dates of 03/20/2012 and Permit Expiration Date**

**Applicable Federal Requirement: 6 NYCRR 249.3 (a)**

**Item 3.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: B-00001

Regulated Contaminant(s):

CAS No: 0NY210-00-0      OXIDES OF NITROGEN

**Item 3.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The current emission source configuration is considered BART for

**New York State Department of Environmental Conservation**

**Permit ID: 6-4058-00003/00379**

**Facility DEC ID: 6405800003**



emissions of Oxides of Nitrogen. The current emission limit of 0.30 lbs NO<sub>x</sub>/MMBtu is the emission limit. Testing shall be completed under an approved protocol once during the term of the permit.

Upper Permit Limit: 0.30 pounds per million Btus

Reference Test Method: EPA RM 7E

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST METHOD  
INDICATED

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2012.

Subsequent reports are due every 6 calendar month(s).

**Condition 4: Compliance Demonstration**  
**Effective between the dates of 03/20/2012 and Permit Expiration Date**

**Applicable Federal Requirement: 6 NYCRR 249.3 (a)**

**Item 4.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: B-00001

Regulated Contaminant(s):

CAS No: 000000-00-5 PM-10

**Item 4.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The current emission source configuration is considered BART for emissions of PM-10. The current emissions of 0.10 lbs PM-10/MMBtu is the emission limit. Testing shall be completed once during the term of the permit.

Upper Permit Limit: 0.10 pounds per million Btus

Reference Test Method: EPA Method 201A

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST METHOD  
INDICATED

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2012.

Subsequent reports are due every 6 calendar month(s).

**Condition 5: Compliance Demonstration**  
**Effective between the dates of 03/20/2012 and Permit Expiration Date**

**Applicable Federal Requirement: 6 NYCRR 249.3 (a)**

**New York State Department of Environmental Conservation**

**Permit ID: 6-4058-00003/00379**

**Facility DEC ID: 6405800003**



**Item 5.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: B-00001

Process: OIL

Regulated Contaminant(s):

CAS No: 007446-09-5      SULFUR DIOXIDE

**Item 5.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE  
PARAMETERS AS SURROGATE

Monitoring Description:

The current limit of 1.5% sulfur by weight fuel oil is considered the BART limit. Fuel supplier certifications shall be used to certify the sulfur level for each delivery.

Parameter Monitored: SULFUR CONTENT

Upper Permit Limit: 1.5 percent by weight

Monitoring Frequency: PER DELIVERY

Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME  
(INSTANTANEOUS/DISCRETE OR GRAB)

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2012.

Subsequent reports are due every 6 calendar month(s).

**Condition 6: Compliance Demonstration**

**Effective between the dates of 03/20/2012 and Permit Expiration Date**

**Applicable Federal Requirement: 6 NYCRR 249.3 (a)**

**Item 6.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: S-00001

Process: POT

Regulated Contaminant(s):

CAS No: 0NY075-00-5      PM-10

**Item 6.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The current emission source configuration is considered BART for emissions of PM-10. The current emissions of 168 tons per year is the emission limit effective January 1, 2014. Testing shall be completed under an approved protocol within 6 months after the emission limit

**New York State Department of Environmental Conservation**

**Permit ID: 6-4058-00003/00379**

**Facility DEC ID: 6405800003**



effective date above. Emission factors established during the stack test shall be used to calculate emissions on an annual basis rolled monthly. Monitoring of the control device is accomplished through the monitoring conditions required under the primary aluminum MACT and satisfy CAM requirements.

Upper Permit Limit: 168 tons per year  
Reference Test Method: EPA Method 201A  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: ANNUAL MAXIMUM ROLLED MONTHLY  
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 7/30/2012.  
Subsequent reports are due every 6 calendar month(s).

**Condition 7: Compliance Demonstration**  
**Effective between the dates of 03/20/2012 and Permit Expiration Date**

**Applicable Federal Requirement: 6 NYCRR 249.3 (a)**

**Item 7.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: S-00001  
Process: POT

Regulated Contaminant(s):  
CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 7.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The current emission source configuration is considered BART for emissions of Oxides of Nitrogen. The current emissions of 50 tons per year is the emission limit effective January 1, 2014. Testing shall be completed under an approved protocol within 6 months after the emission limit effective date above. Emission factors established during the stack test shall be used to calculate emissions on an annual basis rolled monthly.

Upper Permit Limit: 50 tons per year  
Reference Test Method: EPA RM 7E  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: ANNUAL MAXIMUM ROLLED MONTHLY  
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 7/30/2012.  
Subsequent reports are due every 6 calendar month(s).

**Condition 8: Compliance Demonstration**

**New York State Department of Environmental Conservation**

Permit ID: 6-4058-00003/00379

Facility DEC ID: 6405800003



**Effective between the dates of 03/20/2012 and Permit Expiration Date**

**Applicable Federal Requirement:6 NYCRR 249.3 (a)**

**Item 8.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: S-00002

Process: BAK

Regulated Contaminant(s):

CAS No: 0NY075-00-5 PM-10

**Item 8.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The current emission source configuration is considered BART for emissions of PM-10. The current emissions of 24 tons per year is the emission limit effective January 1, 2014. Testing shall be completed under an approved protocol within 6 months after the emission limit effective date above. Emission factors established during the stack test shall be used to calculate emissions on an annual basis rolled monthly. Monitoring of the control device is accomplished under the requirements of the primary aluminum MACT within Alcoa's Title V permit and also satisfies CAM requirements.

Upper Permit Limit: 24 tons per year

Reference Test Method: EPA Method 201A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: ANNUAL MAXIMUM ROLLED MONTHLY

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2012.

Subsequent reports are due every 6 calendar month(s).

**Condition 9: Compliance Demonstration**

**Effective between the dates of 03/20/2012 and Permit Expiration Date**

**Applicable Federal Requirement:6 NYCRR 249.3 (a)**

**Item 9.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: S-00002

Process: BAK

Regulated Contaminant(s):

CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 9.2:**



**New York State Department of Environmental Conservation**

**Permit ID: 6-4058-00003/00379**

**Facility DEC ID: 6405800003**



Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The current emission source configuration is considered BART for emissions of Oxides of Nitrogen. The current emissions of 203 tons per year is the emission limit effective January 1, 2014. Testing shall be completed under an approved protocol within 6 months after the emission limit effective date above. Emission factors established during the stack test shall be used to calculate emissions on an annual basis rolled monthly.

Upper Permit Limit: 203 tons per year

Reference Test Method: EPA RM 7E

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: ANNUAL MAXIMUM ROLLED MONTHLY

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2012.

Subsequent reports are due every 6 calendar month(s).

# New York State Department of Environmental Conservation

Permit ID: 6-4058-00003/00379

Facility DEC ID: 6405800003



~~each air contaminant emitted and the effect of such emissions depending on the deviation of the malfunction and the air contaminants emitted.~~

~~(d) In the event of maintenance, start-up/shutdown or malfunction conditions which result in emissions exceeding any applicable emission standard, the facility owner and/or operator shall take appropriate action to prevent emissions which will result in contravention of any applicable ambient air quality standard. Reasonably available control technology, as determined by the commissioner, shall be applied during any maintenance, start-up/shutdown or malfunction condition subject to this paragraph.~~

~~(e) In order to have a violation of a federal regulation (such as a new source performance standard or national emissions standard for hazardous air pollutants) excused, the specific federal regulation must provide for an affirmative defense during start-up, shutdowns, malfunctions or upsets.~~

## Condition 12: Emission Unit Definition

Effective between the dates of 03/20/2012 and Permit Expiration Date

Applicable State Requirement: 6 NYCRR Subpart 201-5

### Item 12.1:

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: B-00001

Emission Unit Description:

FOUR VIRTUALLY IDENTICAL PACKAGE BOILERS FIRING EITHER  
NATURAL GAS OR #6 FUEL OIL.

Building(s): 216A

### Item 12.2:

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: S-00001

Emission Unit Description:

ONE POTLINE OF ELECTROLYTIC CELLS AND ASSOCIATED  
CONTROL EQUIPMENT. THIS POTLINE IS CATEGORIZED AS A  
CENTER WORK PREBAKE-1 (CWPB-1) AS DESCRIBED IN THE  
DEFINITIONS SECTION OF EPA'S PRIMARY ALUMINUM MACT  
REGULATIONS. THE PERMIT TO CONSTRUCT WAS ISSUED IN  
NOVEMBER 1973.

Building(s): 401  
402

### Item 12.3:

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: S-00002

Emission Unit Description:

ANODE BAKING FURNACE CONSISTING OF 2 RING FURNACES AND  
ASSOCIATED ALUMINA INJECTION DRY SCRUBBER.

Building(s): 351

New York State Department of Environmental Conservation

Permit ID: 6-4058-00003/00379

Facility DEC ID: 6405800003



~~Condition 13: Visible Emissions Limited~~

~~Effective between the dates of 03/20/2012 and Permit Expiration Date~~

~~Applicable State Requirement:6 NYCRR 211.2~~

~~Item 13.1:~~

~~Except as permitted by a specific part of this Subchapter and for open fires for which a restricted burning permit has been issued, no person shall cause or allow any air contamination source to emit any material having an opacity equal to or greater than 20 percent (six minute average) except for one continuous six minute period per hour of not more than 57 percent opacity.~~

Condition 14: Compliance Demonstration

Effective between the dates of 03/20/2012 and Permit Expiration Date

Applicable State Requirement:6 NYCRR 249.3 (f)

Item 14.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 14.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The conditions in this permit for NOx, SO2, and/or PM10 established under Part 249 are based on New York's Best Available Retrofit Technology (BART) Rule (6 NYCRR Part 249), are effective on the date of this permit's issuance, and are state-enforceable. Federal enforceability of these facility-specific conditions is effective on the date on which these emission limits, as submitted to EPA as a revision to New York State's Implementation Plan for Regional Haze, are published in the Federal Register.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

~~\*\*\*\* Emission Unit Level \*\*\*\*~~

~~Condition 15: Process Definition By Emission Unit~~

~~Effective between the dates of 03/20/2012 and Permit Expiration Date~~

~~Applicable State Requirement:6 NYCRR Subpart 201-5~~

~~Item 15.1:~~

~~This permit authorizes the following regulated processes for the cited Emission Unit:~~

~~Emission Unit: B-00001~~

~~Process: GAS~~

~~Source Classification Code: 2-02-002-02~~

~~Process Description:~~

~~FOUR VIRTUALLY IDENTICAL BOILERS CAPABLE OF BURNING~~