



PERMIT
Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Air State Facility
Permit ID: 9-2911-00114/00029
Mod 0 Effective Date: 02/19/2014 Expiration Date: 02/18/2024
Mod 1 Effective Date: 11/18/2015 Expiration Date: 02/18/2024

Permit Issued To: IMERYYS FUSED MINERALS NIAGARA FALLS INC
2000 COLLEGE AVE
MPO BOX 1438
NIAGARA FALLS, NY 14305

Facility: IMERYYS FUSED MINERALS NIAGARA FALLS INC
2000 COLLEGE AVE
NIAGARA FALLS, NY 14302

Contact: LAURA A NOWAK
IMERYYS FUSED MINERALS NIAGARA FALLS INC
2000 COLLEGE AVE
NIAGARA FALLS, NY 14302
(716) 286-1234

Description:
The facility produces brown fused aluminum oxide grits used as abrasive particles in grinding, machining, blasting, cutting operations and for the production of shaped or unshaped refractory materials.

Dedicated process whereby aluminum oxide is heated in two gas-fired rotary kilns. The K-coat small kiln processes a slurry of aluminum oxide coated with a 1% solution of silane and water to impart hardness. It is also used to heat treat grain. Particulate emissions are vented to emission point 00050. The C-coat kiln is a 40 foot rotary kiln used to process a red oxide slurry of for heat treatment. Particulate emissions are controlled by a Torit cartridge filter baghouse and then to emission point 00034. Regulatory requirement for this operation is the 0.15 gr/dscf limit particulate limit of 6NYCRR, Part 212-2.4(a).

Dedicated process for fusing calcined brown alumina using an electric tilt-pour furnace. Fused aluminum oxides are produced in electric arc furnaces by electrothermal fusion at temperatures around 2000°C. Process takes place in furnace room and exhausts to a Sly baghouse and emission point 00047.



Regulatory requirement for this operation is the 0.05 gr/dscf limit particulate limit of 6NYCRR, Part 212-2.4(b).

Dedicated process for production of brown aluminum oxide grain. Process consists of milling, conveying, screening and storage. Dust that is generated is collected by dust collection system and cleaned by cartridge type dust collectors before being discharged thru emission point 00051. Regulatory requirement for this operation is the 0.05 gr/dscf particulate limit of 6NYCRR, Part 212-2.4(b). A federally enforceable emission cap limits PM-10 emissions to less 15 tons per year to establish Prevention of Significant Deterioration (PSD) non-applicability 40 CFR 52-A.21(i)(1).

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified and any Special Conditions included as part of this permit.

Permit Administrator: DAVID S DENK
 DIVISION OF ENVIRONMENTAL PERMITS
 270 MICHIGAN AVE
 BUFFALO, NY 14203-2915

Authorized Signature: _____ Date: ____ / ____ / ____



Notification of Other State Permittee Obligations

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the compliance permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in any compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.



LIST OF CONDITIONS

DEC GENERAL CONDITIONS

General Provisions

- Facility Inspection by the Department
- Relationship of this Permit to Other Department Orders and Determinations
 - Applications for permit renewals, modifications and transfers
 - Applications for permit renewals, modifications and transfers
 - Permit modifications, suspensions or revocations by the Department

Facility Level

- Submission of application for permit modification or renewal-REGION 9 HEADQUARTERS



DEC GENERAL CONDITIONS
****** General Provisions ******
GENERAL CONDITIONS - Apply to ALL Authorized Permits.

Condition 1: Facility Inspection by the Department

Applicable State Requirement: ECL 19-0305

Item 1.1:

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

Item 1.2:

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

Item 1.3:

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

Condition 2: Relationship of this Permit to Other Department Orders and Determinations

Applicable State Requirement: ECL 3-0301 (2) (m)

Item 2.1:

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

Condition 3: Applications for permit renewals, modifications and transfers

Applicable State Requirement: 6 NYCRR 621.11

Item 3.1:

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

Item 3.2:

The permittee must submit a renewal application at least 180 days before expiration of permits for Title V Facility Permits, or at least 30 days before expiration of permits for State Facility Permits.

Item 3.3:

Permits are transferrable with the approval of the department unless specifically prohibited by the statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.



Condition 1-1: Applications for permit renewals, modifications and transfers
Applicable State Requirement: 6 NYCRR 621.11

Item 1-1.1:

The permittee must submit a renewal application at least 180 days before expiration of permits for both Title V and State Facility Permits.

Item 1-1.3:

Permits are transferrable with the approval of the department unless specifically prohibited by the statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

Condition 4: Permit modifications, suspensions or revocations by the Department
Applicable State Requirement: 6 NYCRR 621.13

Item 4.1:

The Department reserves the right to exercise all available authority to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification, suspension or revocation include:

- a) materially false or inaccurate statements in the permit application or supporting papers;
- b) failure by the permittee to comply with any terms or conditions of the permit;
- c) exceeding the scope of the project as described in the permit application;
- d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

****** Facility Level ******

Condition 5: Submission of application for permit modification or renewal-REGION 9 HEADQUARTERS
Applicable State Requirement: 6 NYCRR 621.6 (a)

Item 5.1:

Submission of applications for permit modification or renewal are to be submitted to:
NYSDEC Regional Permit Administrator
Region 9 Headquarters
Division of Environmental Permits
270 Michigan Avenue
Buffalo, NY 14203-2915
(716) 851-7165

New York State Department of Environmental Conservation

Permit ID: 9-2911-00114/00029

Facility DEC ID: 9291100114



Permit Under the Environmental Conservation Law (ECL)

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

IDENTIFICATION INFORMATION

Permit Issued To: IMERYYS FUSED MINERALS NIAGARA FALLS INC
2000 COLLEGE AVE
MPO BOX 1438
NIAGARA FALLS, NY 14305

Facility: IMERYYS FUSED MINERALS NIAGARA FALLS INC
2000 COLLEGE AVE
NIAGARA FALLS, NY 14302

Authorized Activity By Standard Industrial Classification Code:
3291 - ABRASIVE PRODUCTS

Mod 0 Permit Effective Date: 02/19/2014

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Mod 1 Permit Effective Date: 11/18/2015

Permit Expiration Date: 02/18/2024



LIST OF CONDITIONS

FEDERALLY ENFORCEABLE CONDITIONS

Facility Level

1 6 NYCRR 211.1: Air pollution prohibited

Emission Unit Level

2 6 NYCRR 201-7.1: Process Permissible Emissions

EU=0-BROWN

1-1 6 NYCRR 212-1.6 (a): Compliance Demonstration

1-2 6 NYCRR 212-2.4 (b): Compliance Demonstration

EU=0-BROWN,Proc=BRN

*1-3 6 NYCRR 201-7.1: Capping Monitoring Condition

EU=0-BROWN,Proc=KLN

1-4 6 NYCRR 212-2.4 (a): Compliance Demonstration

STATE ONLY ENFORCEABLE CONDITIONS

Facility Level

6 ECL 19-0301: Contaminant List

7 6 NYCRR 201-1.4: Malfunctions and start-up/shutdown activities

8 6 NYCRR Subpart 201-5: Emission Unit Definition

9 6 NYCRR 201-5.2 (c): Renewal deadlines for state facility permits

10 6 NYCRR 201-5.3 (c): Compliance Demonstration

11 6 NYCRR 211.2: Visible Emissions Limited

Emission Unit Level

12 6 NYCRR Subpart 201-5: Emission Point Definition By Emission Unit

13 6 NYCRR Subpart 201-5: Process Definition By Emission Unit

NOTE: * preceding the condition number indicates capping.



FEDERALLY ENFORCEABLE CONDITIONS
****** Facility Level ******

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

This section contains terms and conditions which are federally enforceable. Permittees may also have other obligations under regulations of general applicability

Item A: Sealing - 6 NYCRR 200.5

The Commissioner may seal an air contamination source to prevent its operation if compliance with 6 NYCRR Chapter III is not met within the time provided by an order of the Commissioner issued in the case of the violation.

Sealing means labeling or tagging a source to notify any person that operation of the source is prohibited, and also includes physical means of preventing the operation of an air contamination source without resulting in destruction of any equipment associated with such source, and includes, but is not limited to, bolting, chaining or wiring shut control panels, apertures or conduits associated with such source.

No person shall operate any air contamination source sealed by the Commissioner in accordance with this section unless a modification has been made which enables such source to comply with all requirements applicable to such modification.

Unless authorized by the Commissioner, no person shall remove or alter any seal affixed to any contamination source in accordance with this section.

Item B: Acceptable Ambient Air Quality - 6 NYCRR 200.6

Notwithstanding the provisions of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.

Item C: Maintenance of Equipment - 6 NYCRR 200.7

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications,



required to operate such device effectively.

Item D: Unpermitted Emission Sources - 6 NYCRR 201-1.2

If an existing emission source was subject to the permitting requirements of 6 NYCRR Part 201 at the time of construction or modification, and the owner and/or operator failed to apply for a permit for such emission source then the following provisions apply:

- (a) The owner and/or operator must apply for a permit for such emission source or register the facility in accordance with the provisions of Part 201.
- (b) The emission source or facility is subject to all regulations that were applicable to it at the time of construction or modification and any subsequent requirements applicable to existing sources or facilities.

Item E: Emergency Defense - 6 NYCRR 201-1.5

An emergency constitutes an affirmative defense to an action brought for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An emergency occurred and that the facility owner and/or operator can identify the cause(s) of the emergency;
- (2) The equipment at the permitted facility causing the emergency was at the time being properly operated;
- (3) During the period of the emergency the facility owner and/or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- (4) The facility owner and/or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner and/or operator seeking to establish the occurrence of an emergency has the burden of proof.



(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

Item F: Recycling and Salvage - 6 NYCRR 201-1.7

Where practical, any person who owns or operates an air contamination source shall recycle or salvage air contaminants collected in an air cleaning device according to the requirements of 6 NYCRR.

Item G: Prohibition of Reintroduction of Collected Contaminants to the Air - 6 NYCRR 201-1.8

No person shall unnecessarily remove, handle, or cause to be handled, collected air contaminants from an air cleaning device for recycling, salvage or disposal in a manner that would reintroduce them to the outdoor atmosphere.

Item H: Proof of Eligibility for Sources Defined as Exempt Activities - 6 NYCRR 201-3.2 (a)

The owner and/or operator of an emission source or unit that is eligible to be exempt, may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

Item I: Proof of Eligibility for Sources Defined as Trivial Activities - 6 NYCRR 201-3.3 (a)

The owner and/or operator of an emission source or unit that is listed as being trivial in 6 NYCRR Part 201 may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

Item J: Required Emission Tests - 6 NYCRR 202-1.1



An acceptable report of measured emissions shall be submitted, as may be required by the Commissioner, to ascertain compliance or noncompliance with any air pollution code, rule, or regulation. Failure to submit a report acceptable to the Commissioner within the time stated shall be sufficient reason for the Commissioner to suspend or deny an operating permit. Notification and acceptable procedures are specified in 6 NYCRR Subpart 202-1.

Item K: Open Fires Prohibitions - 6 NYCRR 215.2

Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

Item L: Permit Exclusion - ECL 19-0305

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes 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 02/19/2014 and 02/18/2024

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.

**** Emission Unit Level ****

Condition 2: Process Permissible Emissions
Effective between the dates of 02/19/2014 and 02/18/2024

Applicable Federal Requirement:6 NYCRR 201-7.1

Item 2.1:

The sum of emissions from the regulated process cited shall not exceed the following Potential to Emit (PTE) rates for each regulated contaminant:

Emission Unit: 0-BROWN Process: BRN
CAS No: 0NY075-00-5 (From Mod 1)
Name: PM-10
PTE(s): 29,800 pounds per year 14.9 tons

Condition 1-1: Compliance Demonstration
Effective between the dates of 11/18/2015 and 02/18/2024

Applicable Federal Requirement:6 NYCRR 212-1.6 (a)

Item 1-1.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 0-BROWN

Item 1-1.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

No facility owner or operator shall cause or allow

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emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source or emission point, except for the emission of uncombined water.

Parameter Monitored: OPACITY

Upper Permit Limit: 20 percent

Reference Test Method: Method 9

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING

DESCRIPTION

Averaging Method: 6-MINUTE AVERAGE (METHOD 9)

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 1-2: Compliance Demonstration
Effective between the dates of 11/18/2015 and 02/18/2024

Applicable Federal Requirement: 6 NYCRR 212-2.4 (b)

Item 1-2.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 0-BROWN

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

Item 1-2.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Particulate emissions from the brown aluminum oxide plant (emission point 00051) and for the furnace (emission point 00047) for which an application was received by the department after July 1, 1973 are restricted as follows:

No facility owner or operator shall cause or allow emissions of particulate that exceed 0.050 grains per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis, except in instances where determination of permissible emission rate using process weight for a specific source category emitting solid particulate is based upon Table 5 and Table 6 of Subdivisions 212-2.5(a) and (b) of this Part.

At any time this Department can request a Method 5 source test be conducted on this emission source to demonstrate compliance with the grain concentration limit.

The permittee shall maintain the associated emission control devices according to the facility inspection and

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maintenance program. Records of maintenance activity shall be made available to Department representatives on request.

Upper Permit Limit: 0.05 grains per dsf

Reference Test Method: Method 5

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING

DESCRIPTION

Averaging Method: MAXIMUM - NOT TO BE EXCEEDED PER

OCCURRENCE

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 1-3: Capping Monitoring Condition
Effective between the dates of 11/18/2015 and 02/18/2024

Applicable Federal Requirement: 6 NYCRR 201-7.1

Item 1-3.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

40 CFR 52.21 (i) (1)

Item 1-3.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 1-3.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 1-3.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 1-3.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 1-3.6:



The Compliance Demonstration activity will be performed for:

Emission Unit: 0-BROWN
Process: BRN

Regulated Contaminant(s):
CAS No: ONY075-00-5 PM-10

Item 1-3.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

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

Monitoring Description:

Special conditions limiting emissions of PM-10 from the construction of the Brown Aluminum Oxide facility (emission point 00051) to less than the 15 ton per year significant emissions threshold to establish Prevention of Significant Deterioration (PSD) non-applicability are described in the January 29, 1997 letter from Doleski (DEC) to Ciccarelli (Treibacher). These special conditions are necessary to ensure the continuing efficiency of the emission control equipment at 99.5% and thus maintain the emissions cap.

The control efficiency and emission limit were made federally enforceable through the notice and publication procedures beginning with the Notice of Complete Application in October 30, 1996.

1. The pressure drop across each Donaldson Torit baghouse is to be recorded on a daily basis in a logbook established for this purpose.
2. If either unit is operating beyond the limits of the normal operating range of 2 to 6 inches of water the unit is to be shut down and inspected with repairs documented in the same logbook. Included is to be the type of malfunction, the corrective action taken, and the duration of the shutdown.
3. The permittee will implement a preventative maintenance program which will include training for any new plant personnel involved in the monitoring and maintenance of the control devices.
4. Each unit is to be inspected on a yearly basis using a black light inspection procedure and the results kept on-site.
5. Records of pressure drop readings and yearly

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inspections are to be kept on-site for a period of five years and made available to Department representatives on request.

Parameter Monitored: PM-10

Upper Permit Limit: 14.9 tons per year

Reference Test Method: Method 201 and 202

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE - SEE MONITORING DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 1-4: Compliance Demonstration
Effective between the dates of 11/18/2015 and 02/18/2024

Applicable Federal Requirement: 6 NYCRR 212-2.4 (a)

Item 1-4.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 0-BROWN

Process: KLN

Regulated Contaminant(s):

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

Item 1-4.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Particulate emissions from the two rotary gas-fired kilns which began operation prior to July 1, 1973 are restricted as follows:

(1) No facility owner or operator shall cause or allow emissions of particulate that exceed 0.15 grains per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis, except in instances where the determination of the permissible emission rate using process weight for a specific source category emitting solid particulate is based upon Table 5 and Table 6 of Subdivisions 212-2.5 (a) and (b) of this Part.

This Department reserves the right to request a stack test at any time to demonstrate compliance with the particulate emission limit.

The permittee shall maintain the associated emission control device for the C-coat kiln according to the

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facility inspection and maintenance program. Records of maintenance activity shall be made available to Department representatives on request.

Parameter Monitored: PM-10

Upper Permit Limit: 0.15 grains per dscf

Reference Test Method: Method 5

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING

DESCRIPTION

Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -

SEE MONITORING DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY



STATE ONLY ENFORCEABLE CONDITIONS
****** Facility Level ******

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

This section contains terms and conditions which are not federally enforceable. Permittees may also have other obligations under regulations of general applicability

Item A: Public Access to Recordkeeping for Facilities With State Facility Permits - 6 NYCRR 201-1.10 (a)

Where facility owners and/or operators keep records pursuant to compliance with the requirements of 6 NYCRR Subpart 201-5.4, and/or the emission capping requirements of 6 NYCRR Subpart 201-7, the Department will make such records available to the public upon request in accordance with 6 NYCRR Part 616 - Public Access to Records. Facility owners and/or operators must submit the records required to comply with the request within sixty working days of written notification by the Department.

Item B: General Provisions for State Enforceable Permit Terms and Condition - 6 NYCRR Part 201-5

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

STATE ONLY APPLICABLE REQUIREMENTS

The following conditions are state only enforceable.

Condition 6: Contaminant List
Effective between the dates of 02/19/2014 and 02/18/2024



Applicable State Requirement:ECL 19-0301

Item 6.1:

Emissions of the following contaminants are subject to contaminant specific requirements in this permit(emission limits, control requirements or compliance monitoring conditions).

CAS No: 0NY075-00-0
Name: PARTICULATES

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

Condition 7: Malfunctions and start-up/shutdown activities
Effective between the dates of 02/19/2014 and 02/18/2024

Applicable State Requirement:6 NYCRR 201-1.4

Item 7.1:

(a) The facility owner or operator shall take all necessary and appropriate actions to prevent the emission of air pollutants that result in contravention of any applicable emission standard during periods of start-up, shutdown, or malfunction.

(b) The facility owner or operator shall compile and maintain records of all equipment malfunctions, maintenance, or start-up/shutdown activities when they can be expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the department when requested to do so, or when so required by a condition of a permit issued for the corresponding air contamination source. Such reports shall state whether any violations occurred and, if so, whether they were unavoidable, include the time, frequency and duration of the maintenance and/or start-up/shutdown activities, and an estimate of the emission rates of any air contaminants released. Such records shall be maintained for a period of at least five years and made available for review to department representatives upon request. Facility owners or operators subject to continuous stack monitoring and quarterly reporting requirements need not submit additional reports for equipment maintenance or start-up/shutdown activities for the facility to the department.

(c) In the event that emissions of air contaminants in excess of any emission standard in this Subchapter occur due to a malfunction, the facility owner or operator shall compile and maintain records of the malfunction and notify the department as soon as possible during normal working hours, but not later than two working days after becoming aware that the malfunction occurred. When requested by the department, the facility owner or operator shall submit a written report to the department describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates.

(d) The department may also require the owner or operator to include, in reports described under Subdivisions (b) and (c) of this Section, an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions.

(e) A violation of any applicable emission standard resulting from start-up, shutdown, or malfunction conditions at a permitted or registered facility may not be subject to an enforcement action by the department and/or penalty if the department determines, in its sole discretion, that

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such a violation was unavoidable. The actions and recordkeeping and reporting requirements listed above must be adhered to in such circumstances.

Condition 8: Emission Unit Definition
Effective between the dates of 02/19/2014 and 02/18/2024

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 8.1(From Mod 1):

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

Emission Unit: 0-BROWN

Emission Unit Description:

Emission unit consists of the brown aluminum oxide plant, Plant 8 C-coat kiln, K-coat kiln and a tilt pour electric furnace to fuse alumina.

Building(s): FURNACE
PLANT8
TSNBNP

Condition 9: Renewal deadlines for state facility permits
Effective between the dates of 02/19/2014 and 02/18/2024

Applicable State Requirement:6 NYCRR 201-5.2 (c)

Item 9.1:

The owner or operator of a facility having an issued state facility permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

Condition 10: Compliance Demonstration
Effective between the dates of 02/19/2014 and 02/18/2024

Applicable State Requirement:6 NYCRR 201-5.3 (c)

Item 10.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 10.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Any reports or submissions required by this permit shall be submitted to the Regional Air Pollution Control Engineer (RAPCE) at the following address:

Division of Air Resources
NYS Dept. of Environmental Conservation
Region 9

New York State Department of Environmental Conservation

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270 Michigan Ave.
Buffalo, NY 14203

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 11: Visible Emissions Limited
Effective between the dates of 02/19/2014 and 02/18/2024

Applicable State Requirement:6 NYCRR 211.2

Item 11.1:

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.

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

Condition 12: Emission Point Definition By Emission Unit
Effective between the dates of 02/19/2014 and 02/18/2024

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 12.1(From Mod 1):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 0-BROWN

Emission Point: 00034

Height (ft.): 41 Diameter (in.): 20
NYTMN (km.): 4782.1 NYTME (km.): 171.6 Building: PLANT8

Emission Point: 00047

Height (ft.): 31 Diameter (in.): 42
NYTMN (km.): 4782.1 NYTME (km.): 171.6 Building: FURNACE

Emission Point: 00050

Height (ft.): 22 Diameter (in.): 20
NYTMN (km.): 4782.3 NYTME (km.): 171.6 Building: PLANT8

Emission Point: 00051

Height (ft.): 28 Length (in.): 87 Width (in.): 45
NYTMN (km.): 4782.1 NYTME (km.): 171.5 Building: TSNBNP

Condition 13: Process Definition By Emission Unit
Effective between the dates of 02/19/2014 and 02/18/2024

Applicable State Requirement:6 NYCRR Subpart 201-5



Item 13.1(From Mod 1):

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

Emission Unit: 0-BROWN
Process: BRN Source Classification Code: 3-05-035-01
Process Description:
Dedicated process for production of brown aluminum oxide grain. Process consists of milling, conveying, screening and storage. Dust that is generated is collected by dust collection system and cleaned by Torit cartridge type dust collectors before being discharged through emission point 00051.

Emission Source/Control: 00001 - Control
Control Type: FABRIC FILTER

Emission Source/Control: 00002 - Control
Control Type: FABRIC FILTER

Emission Source/Control: 00003 - Process

Item 13.2(From Mod 1):

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

Emission Unit: 0-BROWN
Process: FUR Source Classification Code: 3-99-999-94
Process Description:
Dedicated process for fusing calcined brown alumina using a tilt-pour furnace. Process takes place in furnace room and exhausts to emission point 00047.

Emission Source/Control: 00004 - Control
Control Type: FABRIC FILTER

Emission Source/Control: 00006 - Process

Item 13.3(From Mod 1):

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

Emission Unit: 0-BROWN
Process: KLN Source Classification Code: 3-05-150-02
Process Description:
Dedicated process whereby aluminum oxide is heat treated in natural gas-fired rotary kilns. Aluminum oxide coated with a 1% solution of silane and water to impart hardness is processed in the K-coat kiln to drive off moisture. The kiln emissions are directed to emission point 00050.

A red oxide slurry is fired in the 40 foot C-coat kiln which is also used for heat treatment of aluminum oxide grain. Emissions are collected by a Torit cartridge



collector. Emissions are directed to emission point
00034.

Emission Source/Control: 00008 - Control
Control Type: FABRIC FILTER

Emission Source/Control: 00007 - Process

Emission Source/Control: 00009 - Process

