



PERMIT
Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Air State Facility
Permit ID: 9-2940-00049/00022
Effective Date: 03/03/2016 Expiration Date: 03/02/2026

Permit Issued To: SAINT-GOBAIN CERAMICS & PLASTICS INC
1 NEW BOND RD
PO BOX 15008
WORCESTER, MA 01606-2614

Contact: GEORGE O DAVIS
6600 WALMORE RD
PO BOX 301
NIAGARA FALLS, NY 14304-0301
(716) 731-8204

Facility: SAINT-GOBAIN CERAMICS & PLASTICS INC
6600 WALMORE ROAD
NIAGARA FALLS, NY 14304

Contact: TIMOTHY VITORINO
SAINT GOBAIN CERAMIC MATERIALS SEEDED GEL
6600 WALMORE RD
NIAGARA FALLS, NY 14304-0301
(716) 731-8200

Description:
The facility manufactures abrasive grains for grinding wheels and sand papers. The basic processes are mixing, gelation, drying, calcining (800 C), sintering (1300 C), grading, and packaging. The calcining step generates particulates, nitrogen oxide emissions which are treated in a four stage scrubbing system identified as a NO_x tower emission point 00001 which scrubs NO_x emissions and recovers nitric acid for re-use in the gelation step. Emissions of air pollutants such as nitric acid, nitrogen oxides, and particulates from the targa dryers, HTB dryer, and drum dryer are treated with wet or impingement scrubbers.

Actual emissions of nitrogen oxides in excess of 95 ton per year is less than the 100 ton major source threshold for Title V and requires an Air State facility permit in accordance with 6NYCRR, Part 201-5.1(a)(4).

Particulate emissions are subject to and shall not to exceed the 0.05 grains/dscf limit in 6NYCRR, Part 212.4(c) from all sources. The wet scrubbers provide particulate control.



The calciners process a synthetic boehmite, therefore it was determined they were not subject to the New Source Performance Standards 40 CFR 60 UUU for Calciners.

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
- 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 renewal application at least 180 days before expiration of permits for both Title V and 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 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: 9-2940-00049/00022

Facility DEC ID: 9294000049



Permit Under the Environmental Conservation Law (ECL)

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

IDENTIFICATION INFORMATION

Permit Issued To: SAINT-GOBAIN CERAMICS & PLASTICS INC
1 NEW BOND RD
PO BOX 15008
WORCESTER, MA 01606-2614

Facility: SAINT-GOBAIN CERAMICS & PLASTICS INC
6600 WALMORE ROAD
NIAGARA FALLS, NY 14304

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

Permit Effective Date: 03/03/2016

Permit Expiration Date: 03/02/2026



LIST OF CONDITIONS

FEDERALLY ENFORCEABLE CONDITIONS

Facility Level

- 1 6 NYCRR 211.1: Air pollution prohibited
- 2 6 NYCRR 212.6 (a): Compliance Demonstration

Emission Unit Level

EU=1-DRYER

- 3 6 NYCRR 212.4 (c): Compliance Demonstration

EU=1-DRYER,Proc=NOX

- 4 6 NYCRR 212.4 (a): Compliance Demonstration

EU=1-DRYER,EP=00001,Proc=NOX

- 5 6 NYCRR 212.4 (c): Compliance Demonstration

EU=1-DSTCL

- 6 6 NYCRR 212.4 (c): Compliance Demonstration

STATE ONLY ENFORCEABLE CONDITIONS

Facility Level

- 7 ECL 19-0301: Contaminant List
- 8 6 NYCRR 201-1.4: Malfunctions and start-up/shutdown activities
- 9 6 NYCRR Subpart 201-5: Emission Unit Definition
- 10 6 NYCRR 201-5.1 (a) (4): Compliance Demonstration
- 11 6 NYCRR 201-5.2 (c): Renewal deadlines for state facility permits
- 12 6 NYCRR 201-5.3 (c): Compliance Demonstration
- 13 6 NYCRR 211.2: Visible Emissions Limited

Emission Unit Level

- 14 6 NYCRR Subpart 201-5: Emission Point Definition By Emission Unit
- 15 6 NYCRR Subpart 201-5: Process Definition By Emission Unit



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 03/03/2016 and 03/02/2026

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 03/03/2016 and 03/02/2026

Applicable Federal Requirement:6 NYCRR 212.6 (a)

Item 2.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 2.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

No person shall cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source, except only the emission of uncombined water. Compliance with this requirement shall be determined by the facility owner/operator conducting a daily survey of visible emissions whenever a process is in operation. If any visible emissions are identified, corrective action is required. The Department reserves the right to perform or require the performance of a Method 9 opacity evaluation

Parameter Monitored: OPACITY

Upper Permit Limit: 20 percent

Reference Test Method: EPA Method 9

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING
DESCRIPTION

Averaging Method: 6-MINUTE AVERAGE (METHOD 9)

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

**** Emission Unit Level ****

Condition 3: Compliance Demonstration



Effective between the dates of 03/03/2016 and 03/02/2026

Applicable Federal Requirement:6 NYCRR 212.4 (c)

Item 3.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-DRYER

Regulated Contaminant(s):
CAS No: 0NY075-00-0 PARTICULATES

Item 3.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The wet scrubber associated with the HTB Dryer (emission point 00013) and the impingement plate scrubbers associated with the drum dryer (emission point 00012) and the three targa dryers, (emission point 00010) and the S-4 dryer(emission point 00003) are to be operated in such a manner that particulate emissions shall not exceed 0.05 grains/dscf.

The facility shall implement a Preventative Maintenance (PM) plan which describes the inspection and operating procedures for the scrubbers. This plan shall be developed in accordance with the manufacturers recommendations or best management practices.

1. The permittee shall install, calibrate, and maintain a device to monitor and record the pressure drop across the scrubber.
2. The permittee shall install, calibrate, and maintain a device to monitor and record the liquid flow rate in the wet scrubber.

Annually, the permitte shall:

1. Conduct an internal inspection for abrasion, corrosion or buildup on fans, ducts, and pipes.
2. Conduct cleaning and inspection of the internal plates on the impingement scrubbers.

As part of the maintenance plan, the permittee must develop and implement corrective action procedures to be followed in the case of the observation of visible emissions, or indication through the periodic scrubber



system inspections that the system(s) is not operating properly. The permittee must initiate corrective action as soon as practicable after the occurrence of an observation or event indicating a problem. A copy of this plan shall be submitted to this Department within 90 days from the permit issuance.

The Department reserves the right to require the performance of a Method 5 emissions evaluation at any time to demonstrate compliance with the particulate emission limitation.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 0.05 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: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 4: Compliance Demonstration
Effective between the dates of 03/03/2016 and 03/02/2026

Applicable Federal Requirement: 6 NYCRR 212.4 (a)

Item 4.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-DRYER

Process: NOX

Regulated Contaminant(s):

CAS No: 007697-37-2 NITRIC ACID

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

Item 4.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The sixteen Harper calciners, each with an associated drop box for initial particulate control, remove nitric acid and water associated with the seeded gel process.

Emissions are treated in a four stage scrubbing operation (packed towers) to control nitrogen oxides, recover nitric acid and for additional particulate control before exhausting to atmosphere through emission point 00001.



Nitrogen oxide is formed when nitric acid is heated to drive off the acid and water in the presence of air. The NO_x passes through the scrubbing system forming nitrogen oxide. The oxygen reacts with NO to form NO₂ which is absorbed in water to form nitric acid. Hydrogen peroxide, an oxidizing agent, is introduced by means of a dosing system to maximize the conversion of these NO_x compounds (NO and NO₂) to nitric acid.

The concentration of nitrogen oxide at the outlet of the tower system is monitored and recorded on a daily circular chart. A reading of 150 ppm will trigger a 32 % hydrogen peroxide metered dosing system to convert the NO_x to nitric acid.

The packed tower scrubber preventative maintenance shall include, at a minimum, inspection and daily recording of:

- a. visible liquid leaks;
- b. system gas leaks;
- c. abrasion, corrosion or buildup on fans, ducts, pipes;

Yearly, the facility shall conduct an internal inspection of the packed scrubber for signs of:

1. corrosion and erosion
2. solids deposits in packed beds or tray orifices
3. solids accumulation in mist eliminators
4. worn packing

All instruments, monitoring devices and control equipment will be calibrated, maintained, and operated according to the manufacturers' specifications. Calibration drift shall be determined monthly.

A QA plan shall be developed and in place 90 days from the permit issuance to include monthly calibration procedures and frequency, and a scrubber preventative maintenance and corrective action program.

Additionally, the permittee will investigate, in a timely manner, any instance where there is cause to believe that the required control efficiency is not being met. These instances include but are not limited to process upsets, control device malfunctions or problems, visible emissions, or complaints. The permittee shall determine the cause of any exceedance, make the necessary correction, and verify that the excess emissions problem has been corrected. Each excursion of operation outside the operational ranges except during startup and shut down periods, including date and time, cause, and corrective



action taken, shall be recorded and kept on site.

Inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur. All deviations from normal operating ranges are to be noted and included in these logs and on request submitted to the NYSDEC Region 9 office under a truthfulness and accuracy statement.

Records of these verifications, investigations and corrective actions will be kept on-site in a format acceptable to the Department for a period of 5 years.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 5: Compliance Demonstration
Effective between the dates of 03/03/2016 and 03/02/2026

Applicable Federal Requirement: 6 NYCRR 212.4 (c)

Item 5.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-DRYER Emission Point: 00001
Process: NOX

Regulated Contaminant(s):
CAS No: 0NY075-00-0 PARTICULATES

Item 5.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The sixteen Harper calciners, are each equipped with an associated drop box for initial particulate control, and are directed to four (4) packed towers for additional control of particulate, nitrogen oxides and nitric acid emissions and then exhausted to atmosphere through emission point 00001.

The facility will not cause emissions of solid particulates from this emission point to exceed 0.050 grains of particulates per cubic foot of exhaust gas,

New York State Department of Environmental Conservation

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Facility DEC ID: 9294000049



expressed at standard conditions on a dry gas basis. The Department reserves the right to require the performance of a Method 5 emissions evaluation at any time.

Additionally, the permittee will investigate, in a timely manner, any instance where there is cause to believe that particulate emissions above 0.050 gr/dscf are occurring or have occurred. These instances include but are not limited to process upsets, control device malfunctions or problems, abnormal visible emissions, complaints, etc. The permittee shall determine the cause of any exceedance, make the necessary correction, and verify that the excess emissions problem has been corrected.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 0.05 grains per dscf

Reference Test Method: Method 5

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: MAXIMUM - NOT TO BE EXCEEDED PER OCCURRENCE

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2017.

Subsequent reports are due every 12 calendar month(s).

Condition 6: Compliance Demonstration
Effective between the dates of 03/03/2016 and 03/02/2026

Applicable Federal Requirement: 6 NYCRR 212.4 (c)

Item 6.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-DSTCL

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

Item 6.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Each process emission source associated with this emission unit: the pneumatic conveyor system (emission point 00005), central vacuum (emission point 00011), and developmental center Gen-3 kiln (cyclone-emission point



00004) shall not emit particulates in excess of 0.05 gr/dscf.

The dust collectors associated with these process sources shall be maintained and operated to ensure compliance with the grain concentration limitation.

The dust collector (s) are to be maintained according to the facility maintenance program. As part of the maintenance plan, the permittee must develop and implement corrective action procedures to be followed in the case of the observation of visible emissions from the baghouse, or the indication through the periodic baghouse system inspections that the system is not operating properly. The permittee will investigate, in a timely manner, any instance where there is cause to believe that particulate emissions above 0.050 gr/dscf are occurring or have occurred. The permittee must initiate corrective action as soon as practicable after the occurrence of the observation or event indicating a problem. The permittee shall determine the cause of any exceedance, make the necessary correction, and verify that the excess emissions problem has been corrected. These instances include but are not limited to process upsets, control device malfunctions or problems, abnormal visible emissions, complaints, etc.

At a minimum, the permittee shall conduct the following activities and maintain records of the results of the activities:

1. Daily monitoring of the pressure drop across each baghouse cell, or across the baghouse if it is not possible to monitor each cell individually, to ensure the pressure drop is within the normal operating range identified in the baghouse maintenance plan;
2. Weekly confirmation that the baghouse dust is being removed from the baghouse and cyclone hoppers through visual inspection, or equivalent means of ensuring the proper functioning of removal mechanisms;
3. Monthly check of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means;
4. Quarterly confirmation of the physical integrity of the baghouse structure through visual inspection of the baghouse interior for air leaks;
5. Quarterly, inspect filters for leaks,



6. Semi-annual inspection of fans for wear, material buildup, and corrosion through visual inspection, vibration detectors, or equivalent means,

7. Semi-annual inspection of the cyclone collector to detect corrosion, wear, or holes in the equipment and make repairs as necessitated.

The Department reserves the right to require the performance of a Method 5 emissions test to determine compliance with the particulate emission limit.

Records of these verifications, investigations and corrective actions will be kept on-site for a period of five years.

Should the Department determine that permittee's record keeping format is inadequate to demonstrate compliance with this condition, it shall provide written notice to the permittee stating the inadequacies, and permittee shall have 90 days to revise its prospective record keeping format in a manner acceptable to the Department.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 0.05 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 7: Contaminant List
Effective between the dates of 03/03/2016 and 03/02/2026



Applicable State Requirement:ECL 19-0301

Item 7.1:

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

CAS No: 007697-37-2
Name: NITRIC ACID

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

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

**Condition 8: Malfunctions and start-up/shutdown activities
Effective between the dates of 03/03/2016 and 03/02/2026**

Applicable State Requirement:6 NYCRR 201-1.4

Item 8.1:

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

Condition 9: Emission Unit Definition
Effective between the dates of 03/03/2016 and 03/02/2026

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 9.1:

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

Emission Unit: 1-DRYER

Emission Unit Description:

This emission unit reflects the dryers for the production of ceramic materials and associated emission control equipment. Included are the S-4 dryer, the NOx Tower, the Targa Dryers, the Drum dryer and the HTB Dryer.

Building(s): BLDG 1

Item 9.2:

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

Emission Unit: 1-DSTCL

Emission Unit Description:

This emission unit the pneumatic conveyor system SLY dust collector emission point 00005, central vacuum dust collector, emission point 00011, and developmental center Gen-3kiln to emission point 00004.

Building(s): BLDG 1

Condition 10: Compliance Demonstration
Effective between the dates of 03/03/2016 and 03/02/2026

Applicable State Requirement:6 NYCRR 201-5.1 (a) (4)

Item 10.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

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

Item 10.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The permittee having potential emissions of nitrogen oxides (NOx) in excess of 99 ton and actual emissions of

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greater than 80 tons based on 7560 hours of operation), shall keep records of these emissions and review them annually. If during any consecutive twelve month period, these actual hours are exceeded and potential emissions exceed 100 tpy, this Department shall be notified and a permit modification shall be submitted requesting a federally enforceable emissions cap.

Monitoring Frequency: ANNUALLY

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 11: Renewal deadlines for state facility permits
Effective between the dates of 03/03/2016 and 03/02/2026

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

Item 11.1:

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 12: Compliance Demonstration
Effective between the dates of 03/03/2016 and 03/02/2026

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

Item 12.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 12.2:

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
270 Michigan Ave.
Buffalo, NY 14203

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2017.

Subsequent reports are due every 12 calendar month(s).

Condition 13: Visible Emissions Limited
Effective between the dates of 03/03/2016 and 03/02/2026



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.

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

**Condition 14: Emission Point Definition By Emission Unit
Effective between the dates of 03/03/2016 and 03/02/2026**

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 14.1:

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

Emission Unit: 1-DRYER

Emission Point: 00001	Height (ft.): 40	Diameter (in.): 12	
	NYTMN (km.): 4780.1	NYTME (km.): 180.3	Building: BLDG 1
Emission Point: 00003	Height (ft.): 40	Diameter (in.): 54	
	NYTMN (km.): 4780.1	NYTME (km.): 180.3	Building: BLDG 1
Emission Point: 00010	Height (ft.): 21	Length (in.): 6	Width (in.): 8
	NYTMN (km.): 4780.1	NYTME (km.): 180.3	Building: BLDG 1
Emission Point: 00012	Height (ft.): 42	Diameter (in.): 54	
	NYTMN (km.): 4780.1	NYTME (km.): 180.3	Building: BLDG 1
Emission Point: 00013	Height (ft.): 50	Diameter (in.): 42	
	NYTMN (km.): 4780.1	NYTME (km.): 180.3	Building: BLDG 1

Item 14.2:

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

Emission Unit: 1-DSTCL

Emission Point: 00004	Height (ft.): 38	Diameter (in.): 12	
	NYTMN (km.): 4780.1	NYTME (km.): 180.3	Building: BLDG 1

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Emission Point: 00005
Height (ft.): 40 Diameter (in.): 13
NYTMN (km.): 4780.1 NYTME (km.): 180.3 Building: BLDG 1

Emission Point: 00011
Height (ft.): 12 Diameter (in.): 4
NYTMN (km.): 4780.1 NYTME (km.): 180.3 Building: BLDG 1

Condition 15: Process Definition By Emission Unit
Effective between the dates of 03/03/2016 and 03/02/2026

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: 1-DRYER
Process: DDR
Process Description:
Steam heated drum dryer to dry green product. Scrubber used to remove nitric acid and dust and then exhausts to emission point 00012.

Emission Source/Control: DRYSC - Control
Control Type: IMPINGEMENT PLATE SCRUBBER

Emission Source/Control: DDRYR - Process

Item 15.2:

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

Emission Unit: 1-DRYER
Process: HTB
Process Description:
The HTB tunnel dryer is used to dry green product. A scrubber is used to remove nitric acid and dust from the air stream which exhausts to emission point 00013.

Emission Source/Control: HTBSC - Control
Control Type: SCRUBBER - PACKED BED

Emission Source/Control: HTBDR - Process

Item 15.3:

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

Emission Unit: 1-DRYER
Process: NOX Source Classification Code: 3-05-150-02
Process Description:
Hydrated alumina "boehmite" is converted into a granular material in the seeded gel process. Emissions from the calcining operation which removes nitric acid and water



associated with the boehmite are treated in a four stage scrubbing operation. Emissions from the sixteen Harper calciners, each with an associated drop box for initial particulate control, are directed to four (4) packed towers for control of particulate, nitrogen oxides and nitric acid emissions and then to atmosphere through emission point 00001.

Emission Source/Control: NOXS - Control
Control Type: SCRUBBER - PACKED BED

Emission Source/Control: NOXS3 - Control
Control Type: SCRUBBER - PACKED BED

Emission Source/Control: NOXS4 - Control
Control Type: SCRUBBER - PACKED BED

Emission Source/Control: NOX-T - Control
Control Type: WET SCRUBBER

Emission Source/Control: KILNS - Process

Item 15.4:

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

Emission Unit: 1-DRYER

Process: SDR

Process Description:

The S-4 gas tunnel dryer is used to dry green product and is equipped with an impingement plate scrubber for the control of nitrogen oxide and nitric acid emissions and particulates. (emission point 00003)

Emission Source/Control: S4DRS - Control
Control Type: IMPINGEMENT PLATE SCRUBBER

Emission Source/Control: S-4DR - Process

Item 15.5:

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

Emission Unit: 1-DRYER

Process: TAR

Process Description:

This process consists of three Targa dryers for drying of extruded alumina gel. Emissions are directed to an impingement plate scrubber for the control of particulate, nitrogen oxide and nitric acid emissions. (emission point 00010) There is also a Torit dust collector associated with this unit however it vents inside. There are several pick-up points associated with the two dust collectors along the Targa drying line.



Emission Source/Control: TARSC - Control
Control Type: IMPINGEMENT PLATE SCRUBBER

Emission Source/Control: TARGA - Process

Item 15.6:

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

Emission Unit: 1-DSTCL
Process: CVD
Process Description:
Central vacuum system used to collect residual which is filtered out of the airstream and directed to a baghouse and then to emission point 00011.

Emission Source/Control: CVDC1 - Control
Control Type: FABRIC FILTER

Emission Source/Control: CVACU - Process

Item 15.7:

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

Emission Unit: 1-DSTCL
Process: KLN
Process Description:
Developmental rotary kilns (2) used to sinter product, NOx removed with catalytic unit and vented to fabric filter and emission point 00004.

Emission Source/Control: CDCDV - Control
Control Type: CENTRIFUGAL

Emission Source/Control: CPC84 - Control
Control Type: CATALYTIC REDUCTION

Emission Source/Control: 1KLN3 - Process

Item 15.8:

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

Emission Unit: 1-DSTCL
Process: SLY Source Classification Code: 3-05-150-01
Process Description:
Pneumatic conveyer for transporting raw materials which are filtered out of the airstream and vented to a Sly dust collector.

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



Emission Source/Control: PNEUM - Process

