



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

**IDENTIFICATION INFORMATION**

Permit Type: Air Title V Facility  
Permit ID: 9-2930-00032/00263  
Effective Date: 02/09/2010 Expiration Date: 02/08/2015

Permit Issued To: TAM CERAMICS GROUP OF NY LLC  
4511 HYDE PARK BLVD  
NIAGARA FALLS, NY 14305

Contact: GEORGE BILKEY  
TAM CERAMICS INC  
4511 HYDE PARK BLVD  
NIAGARA FALLS, NY 14305  
(716) 278-9595

Facility: TAM CERAMICS LLC  
4511 HYDE PARK BLVD  
NIAGARA FALLS, NY 14305-0067

Contact: DOUGLAS SIEGMANN  
TAM CERAMICS  
4511 HYDE PARK BLVD  
NIAGARA FALLS, NY 14305

Description:

**TAM Ceramics, Inc.**  
**Title V Permit**  
**Site Description**

**TAM Ceramics, Inc.**, located in Niagara Falls, New York is a manufacturer of refractory mixtures, dielectric and ceramic powders. Raw materials are processed by furnacing, crushing, screening, blending, drying, and sometimes calcining. Primary products produced are titanium oxide, zirconium silicate, potassium titanate, zirconium oxide and dielectric powders primarily manufactured from barium titanate.

**Emission units:**

There are 59 point sources described within the seven emission units associated with this permit. Each emission unit consists of various processes by which calcined and/or uncalcined materials may be fed through a varied series of dry mills and wet mills, holding tanks, screens and filters, dryers, and calciners prior to final product packout. Emission unit 00002 additionally consists of four submersion-type electric arc furnaces used for production of high purity zircon, rotary gas-fired calciners, and a carbon bakeout furnace in addition to various crushing, grinding, blending and milling operations. Emission unit 00003 consists of final milling prior to packout or further processing. Emission units 00004 and 00005 consist of rotary gas fired calciners and associated milling, classification, and material handling equipment. In emission unit 00006 dielectric products are produced by calcining and further processing materials. Emission unit 00007 includes the calcining of material in three electric kilns.

**Emissions:**



TAM Ceramics is a major source subject to 40 CFR Title V permitting requirements as determined by the potential to emit 6796 tons per year of particulate matter, 4479 tons per year of PM-10, and 379 tons per year of nitrogen oxides. Stack testing has been performed on various representative processes in order to develop emission factors which were used in conjunction with production rates in the completion of this Title V application.

**Applicable Requirements:**

Particulate matter is subject to the regulatory emission limits of 6NYCRR, Part 212.3(b) and 212.4(c) which are .15 and .05 grains/dscf respectively. In addition, potential hydrogen chloride emitted from emission point 625 in the amount of 107 pounds per hour requires a control efficiency of 94% as required by 6NYCRR, Part 212.4(a). Results from source tests conducted on the three electric arc furnaces demonstrated that actual nitrogen oxide(NO<sub>x</sub>) emissions are in excess of 100 tons per year and require compliance with the Reasonably Available Control Technology(RACT) requirements of 6NYCRR, Part 212.10. A RACT analysis was performed and submitted for the three single-phase electric arc furnaces and one small scale three-phase electric arc R & D furnace, each described within emission unit 00002. Because there are no control options available, TAM requests a technical variance from the RACT requirements. Both this Department and the United States Environmental Protection Agency(USEPA) have conducted a preliminary review of the RACT analysis and found it to be acceptable. This permit incorporates a special condition for emission unit 00002 which limits actual NO<sub>x</sub> emissions from these four sources to 15.9#/hour per furnace and 210 tons per year total. Each furnace consists of a steel shell with a flat bottom and an inner shell which is constructed of carbon, therefore, there is no refractory maintenance requirement. The variance request will be formally submitted to the USEPA as a source specific revision to the State Implementation Plan(SIP). A consent order and compliance plan have been finalized and are included within the permit for processes B01 and B05 in emission unit 00002.

**Compliance Monitoring:**

**Baghouses:**

Tam utilizes 44 fabric filter dust collectors in the control of particulate emissions at the facility. In order to demonstrate continuous compliance with 6NYCRR, Part 212, inspection and maintenance procedures as described in Attachment B have been established which consist of daily inspections to record magnehelic readings and daily visible emissions evaluations. If visible emissions are observed or deviations from the normal operating ranges specified on the log sheets noted, an inspection of the control equipment is conducted as per the troubleshooting guidelines and the required maintenance procedures implemented. In addition, weekly or between production runs, a visual inspection to determine the physical integrity of bags and supporting cages and appurtenances is conducted.

**Scrubber:**

A water scrubber is used to control hydrochloric acid vapors and particulates from the high purity barium titanate operation in building 147. These emissions are generated from titanium tetrachloride decomposition and through the addition of raw materials to the process and mix tanks. The scrubber is operated 8400 hours per year and is only shut down for maintenance or if none of the associated processes is operating. The maintenance program described in Attachment E consists of a twice per year scheduled cleaning of the system packing and associated air and water nozzles. In addition, each time scrubber maintenance is performed, an internal inspection of the scrubber housing will be performed to identify signs of wear or corrosion.

**Cyclones:**

Cyclones are utilized for the control of particulate emissions associated with two rotary gas-fired calciners, emission points 203 and 401. Inspection, maintenance, and recordkeeping activities as described in Attachment D are conducted on a minimum six



month basis or as necessitated by daily visible emissions evaluations.

**Settling Chambers:**

Settling chambers are utilized as the primary control of emissions from three rotary gas-fired calciners, emission points 501, 601, and 602. Inspection, maintenance, and recordkeeping activities as described in Attachment C are conducted on a minimum six month basis or as necessitated by daily visible emissions evaluations.

**Fugitives:**

Raw material and product storage is enclosed in buildings and storage tanks to minimize fugitive emissions. There are no applicable requirements.

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:            DOUGLAS E BORSCHER  
                                                 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 \*\*\*\***

**For the purpose of your Title V permit, the following section contains state-only enforceable terms and conditions.**

**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 to the Department for review and approval.



**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 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: 9-2930-00032/00263

Facility DEC ID: 9293000032



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

**ARTICLE 19: AIR POLLUTION CONTROL - TITLE V PERMIT**

**IDENTIFICATION INFORMATION**

Permit Issued To: TAM CERAMICS GROUP OF NY LLC  
4511 HYDE PARK BLVD  
NIAGARA FALLS, NY 14305

Facility: TAM CERAMICS LLC  
4511 HYDE PARK BLVD  
NIAGARA FALLS, NY 14305-0067

Authorized Activity By Standard Industrial Classification Code:  
3295 - MINERALS, GROUND OR TREATED  
3297 - NONCLAY REFRACTORIES  
3299 - NONMETALLIC MINERAL PRODUCTS

Permit Effective Date: 02/09/2010

Permit Expiration Date: 02/08/2015





## LIST OF CONDITIONS

### FEDERALLY ENFORCEABLE CONDITIONS

#### Facility Level

- 2 6 NYCRR 200.6: Acceptable Ambient Air Quality
- 3 6 NYCRR 201-6.5 (a) (7): Fees
- 4 6 NYCRR 201-6.5 (c): Recordkeeping and reporting of compliance monitoring
- 5 6 NYCRR 201-6.5 (c) (2): Monitoring, Related Recordkeeping, and Reporting Requirements.
- 6 6 NYCRR 201-6.5 (c) (3) (ii): Compliance Certification
- 7 6 NYCRR 201-6.5 (e): Compliance Certification
- 8 6 NYCRR 202-2.1: Compliance Certification
- 9 6 NYCRR 202-2.5: Recordkeeping requirements
- 10 6 NYCRR Part 215: Open Fires Prohibited at Industrial and Commercial Sites
- 1 6 NYCRR 215.2: Open Fires - Prohibitions
- 11 6 NYCRR 200.7: Maintenance of Equipment
- 12 6 NYCRR 201-1.7: Recycling and Salvage
- 13 6 NYCRR 201-1.8: Prohibition of Reintroduction of Collected Contaminants to the air
- 14 6 NYCRR 201-3.2 (a): Exempt Sources - Proof of Eligibility
- 15 6 NYCRR 201-3.3 (a): Trivial Sources - Proof of Eligibility
- 16 6 NYCRR 201-6.5 (a) (4): Standard Requirement - Provide Information
- 17 6 NYCRR 201-6.5 (a) (8): General Condition - Right to Inspect
- 18 6 NYCRR 201-6.5 (d) (5): Standard Requirements - Progress Reports
- 19 6 NYCRR 201-6.5 (f) (6): Off Permit Changes
- 20 6 NYCRR 202-1.1: Required Emissions Tests
- 21 6 NYCRR 211.3: Visible Emissions Limited
- 22 40 CFR Part 68: Accidental release provisions.
- 23 40CFR 82, Subpart F: Recycling and Emissions Reduction
- 24 40CFR 82, Subpart F: 40 CFR Part 82 - Applicability
- 25 6 NYCRR Subpart 201-6: Emission Unit Definition
- 26 6 NYCRR 201-6.5 (f): Compliance Certification
- 27 6 NYCRR Part 212: Compliance Certification
- 28 6 NYCRR 212.6 (a): Compliance Certification

#### Emission Unit Level

- 29 6 NYCRR Subpart 201-6: Emission Point Definition By Emission Unit
- 30 6 NYCRR Subpart 201-6: Process Definition By Emission Unit

#### EU=0-00002

- 31 6 NYCRR 212.3 (b): Compliance Certification
- 32 6 NYCRR 212.4 (c): Compliance Certification
- 33 6 NYCRR 212.10 (c) (3): Compliance Certification

#### EU=0-00002,EP=00201

- 34 40 CFR Part 64: Compliance Certification

#### EU=0-00002,EP=00203,Proc=B03



35 6 NYCRR 212.3 (b): Compliance Certification

**EU=0-00003,EP=00301**

36 6 NYCRR 212.3 (b): Compliance Certification

**EU=0-00004**

37 6 NYCRR 212.4 (c): Compliance Certification

**EU=0-00004,EP=00401**

38 6 NYCRR 212.4 (c): Compliance Certification

**EU=0-00005,EP=00501**

39 6 NYCRR 212.3 (b): Compliance Certification

**EU=0-00005,EP=00502**

40 6 NYCRR 212.3 (b): Compliance Certification

**EU=0-00005,EP=00503**

41 6 NYCRR 212.4 (c): Compliance Certification

42 40 CFR Part 64: Compliance Certification

**EU=0-00006**

43 6 NYCRR 212.3 (b): Compliance Certification

44 6 NYCRR 212.3 (b): Compliance Certification

45 6 NYCRR 212.4 (c): Compliance Certification

**EU=0-00006,EP=00625**

46 6 NYCRR 212.4 (c): Compliance Certification

**STATE ONLY ENFORCEABLE CONDITIONS**

**Facility Level**

47 ECL 19-0301: Contaminant List

48 6 NYCRR 201-1.4: Unavoidable noncompliance and violations

49 6 NYCRR 211.2: Air pollution prohibited

**Emission Unit Level**

**EU=0-00006,EP=00625**

50 6 NYCRR 212.4 (a): Compliance Demonstration



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

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**  
**The items listed below are not subject to the annual compliance certification requirements under Title V. Permittees may also have other obligations under regulations of general applicability.**

**Item A: 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 B: Public Access to Recordkeeping for Title V Facilities - 6 NYCRR 201-1.10 (b)**

The Department will make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to Section 503(e) of the Act, except for information entitled to confidential treatment pursuant to 6 NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.



**Item C: Timely Application for the Renewal of Title V Permits - 6 NYCRR 201-6.3 (a) (4)**

Owners and/or operators of facilities having an issued Title V 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.

**Item D: Certification by a Responsible Official - 6 NYCRR 201-6.3 (d) (12)**

Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official. This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

**Item E: Requirement to Comply With All Conditions - 6 NYCRR 201-6.5 (a) (2)**

The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

**Item F: Permit Revocation, Modification, Reopening, Reissuance or Termination, and Associated Information Submission Requirements - 6 NYCRR 201-6.5 (a) (3)**

This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**Item G: Cessation or Reduction of Permitted Activity Not a Defense - 6 NYCRR 201-6.5 (a) (5)**

It shall not be a defense for a permittee in an enforcement action to claim that a cessation or reduction in the permitted activity would have been necessary in order to maintain compliance with the conditions of this permit.

**Item H: Property Rights - 6 NYCRR 201-6.5 (a) (6)**

This permit does not convey any property rights of any sort or any exclusive privilege.



**Item I: Severability - 6 NYCRR 201-6.5 (a) (9)**

If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.

**Item J: Permit Shield - 6 NYCRR 201-6.5 (g)**

All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:

- i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;
- ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;
- iii. The applicable requirements of Title IV of the Act;
- iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

**Item K: Reopening for Cause - 6 NYCRR 201-6.5 (i)**

This Title V permit shall be reopened and revised under any of the following circumstances:

- i. If additional applicable requirements under the Act become applicable where this permit's remaining term is



three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 201-6.7 and Part 621.

ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.

iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

**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.

**MANDATORY FEDERALLY ENFORCEABLE PERMIT CONDITIONS  
SUBJECT TO ANNUAL CERTIFICATIONS AT ALL TIMES**

**The following federally enforceable permit conditions are mandatory for all Title V permits and are subject to annual compliance certification requirements at all times.**

**Condition 2: Acceptable Ambient Air Quality**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 200.6**

**Item 2.1:**  
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.

**Condition 3: Fees**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 201-6.5 (a) (7)**

**Item 3.1:**  
The owner and/or operator of a stationary source shall pay fees to the Department consistent with the fee schedule authorized by ECL 72-0302.

**Condition 4: Recordkeeping and reporting of compliance monitoring**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 201-6.5 (c)**

**Item 4.1:**



The following information must be included in any required compliance monitoring records and reports:

- (i) The date, place, and time of sampling or measurements;
- (ii) The date(s) analyses were performed;
- (iii) The company or entity that performed the analyses;
- (iv) The analytical techniques or methods used including quality assurance and quality control procedures if required;
- (v) The results of such analyses including quality assurance data where required; and
- (vi) The operating conditions as existing at the time of sampling or measurement.

Any deviation from permit requirements must be clearly identified in all records and reports. Reports must be certified by a responsible official, consistent with Section 201-6.3 of this Part 201.

**Condition 5: Monitoring, Related Recordkeeping, and Reporting Requirements.**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement: 6 NYCRR 201-6.5 (c) (2)**

**Item 5.1:**

Compliance monitoring and recordkeeping shall be conducted according to the terms and conditions contained in this permit and shall follow all quality assurance requirements found in applicable regulations. Records of all monitoring data and support information must be retained for a period of at least 5 years from the date of the monitoring, sampling, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

**Condition 6: Compliance Certification**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement: 6 NYCRR 201-6.5 (c) (3) (ii)**

**Item 6.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 6.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

To meet the requirements of this facility permit with respect to reporting, the permittee must:

Submit reports of any required monitoring at a minimum





frequency of every 6 months, based on a calendar year reporting schedule. These reports shall be submitted to the Department within 30 days after the end of a reporting period. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the responsible official for this facility.

Notify the Department and report permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations shall be submitted to the permitting authority based on the following schedule:

(1) For emissions of a hazardous air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.

(2) For emissions of any regulated air pollutant, excluding those listed in paragraph (1) of this section, that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.

(3) For all other deviations from permit requirements, the report shall be contained in the 6 month monitoring report required above.

(4) This permit may contain a more stringent reporting requirement than required by paragraphs (1), (2) or (3) above. If more stringent reporting requirements have been placed in this permit or exist in applicable requirements that apply to this facility, the more stringent reporting requirement shall apply.

If above paragraphs (1) or (2) are met, the source must notify the permitting authority by telephone during normal business hours at the Regional Office of jurisdiction for this permit, attention Regional Air Pollution Control Engineer (RAPCE) according to the timetable listed in paragraphs (1) and (2) of this section. For deviations and incidences that must be reported outside of normal business hours, on weekends, or holidays, the DEC Spill Hotline phone number at 1-800-457-7362 shall be used. A



written notice, certified by a responsible official consistent with 6 NYCRR Part 201-6.3(d)(12), must be submitted within 10 working days of an occurrence for deviations reported under (1) and (2). All deviations reported under paragraphs (1) and (2) of this section must also be identified in the 6 month monitoring report required above.

The provisions of 6 NYCRR 201-1.4 shall apply if the permittee seeks to have a violation excused unless otherwise limited by regulation. 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. Notwithstanding any recordkeeping and reporting requirements in 6 NYCRR 201-1.4, reports of any deviations shall not be on a less frequent basis than the reporting periods described in paragraphs (1) and (4) above.

In the case of any condition contained in this permit with a reporting requirement of "Upon request by regulatory agency" the permittee shall include in the semiannual report, a statement for each such condition that the monitoring or recordkeeping was performed as required or requested and a listing of all instances of deviations from these requirements.

In the case of any emission testing performed during the previous six month reporting period, either due to a request by the Department, EPA, or a regulatory requirement, the permittee shall include in the semiannual report a summary of the testing results and shall indicate whether or not the Department or EPA has approved the results.

All semiannual reports shall be submitted to the Administrator (or his or her representative) as well as two copies to the Department (one copy to the regional air pollution control engineer (RAPCE) in the regional office and one copy to the Bureau of Quality Assurance (BQA) in the DEC central office). Mailing addresses for the above referenced persons are contained in the monitoring condition for 6 NYCRR Part 201-6.5(e), contained elsewhere in this permit.

Monitoring Frequency: SEMI-ANNUALLY  
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 7/30/2010.  
Subsequent reports are due every 6 calendar month(s).



**Condition 7: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement: 6 NYCRR 201-6.5 (e)**

**Item 7.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 7.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Requirements for compliance certifications with terms and conditions contained in this facility permit include the following:

- i. Compliance certifications shall contain:
  - the identification of each term or condition of the permit that is the basis of the certification;
  - the compliance status;
  - whether compliance was continuous or intermittent;
  - the method(s) used for determining the compliance status of the facility, currently and over the reporting period consistent with the monitoring and related recordkeeping and reporting requirements of this permit;
  - such other facts as the Department may require to determine the compliance status of the facility as specified in any special permit terms or conditions; and
  - such additional requirements as may be specified elsewhere in this permit related to compliance certification.
- ii. The responsible official must include in the annual certification report all terms and conditions contained in this permit which are identified as being subject to certification, including emission limitations, standards, or work practices. That is, the provisions labeled herein as "Compliance Certification" are not the only provisions of this permit for which an annual certification is required.
- iii. Compliance certifications shall be submitted annually. Certification reports are due 30 days after the anniversary date of four consecutive calendar quarters. The first report is due 30 days after the calendar quarter that occurs just prior to the permit anniversary date, unless another quarter has been acceptable by the Department.

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iv. All compliance certifications shall be submitted to the Administrator (or his or her representative) as well as two copies to the Department (one copy to the regional air pollution control engineer (RAPCE) in the regional office and one copy to the Bureau of Quality Assurance (BQA) in the DEC central office). Please send annual compliance certifications to Chief of the Stationary Source Compliance Section, the Region 2 EPA representative for the Administrator, at the following address:

USEPA Region 2  
Air Compliance Branch  
290 Broadway  
New York, NY 10007-1866

The address for the RAPCE is as follows:

270 Michigan Avenue  
Buffalo, NY 14203-2999

The address for the BQA is as follows:

NYSDEC  
Bureau of Quality Assurance  
625 Broadway  
Albany, NY 12233-3258

Monitoring Frequency: ANNUALLY  
Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 1/30/2011.  
Subsequent reports are due on the same day each year

**Condition 8: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 202-2.1**

**Item 8.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 8.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Emission statements shall be submitted on or before April 15th each year for emissions of the previous calendar year.

Monitoring Frequency: ANNUALLY  
Reporting Requirements: ANNUALLY (CALENDAR)



Reports due by April 15th for previous calendar year

**Condition 9: Recordkeeping requirements**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 202-2.5**

**Item 9.1:**

(a) The following records shall be maintained for at least five years:

- (1) a copy of each emission statement submitted to the department; and
- (2) records indicating how the information submitted in the emission statement was determined, including any calculations, data, measurements, and estimates used.

(b) These records shall be made available at the facility to the representatives of the department upon request during normal business hours.

**Condition 10: Open Fires Prohibited at Industrial and Commercial Sites**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR Part 215**

**Item 10.1:**

No person shall burn, cause, suffer, allow or permit the burning in an open fire of garbage, refuse, rubbish for salvage, or rubbish generated by industrial or commercial activities.

**Condition 1: Open Fires - Prohibitions**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 215.2**

**Item 1.1:**

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

**Item 1.2**

Per Section 215.3, burning in an open fire, provided it is not contrary to other law or regulation, will be allowed as follows:

- (a) On-site burning in any town with a total population less than 20,000 of downed limbs and branches (including branches with attached leaves or needles) less than six inches in diameter and eight feet in length between May 15th and the following March 15th. For the purposes of this subdivision, the total population of a town shall include the population of any village or portion thereof located within the town. However, this subdivision shall not be construed to allow burning within any village.
- (b) Barbecue grills, maple sugar arches and similar outdoor cooking devices when actually used for cooking or processing food.
- (c) Small fires used for cooking and camp fires provided that only charcoal or untreated wood is used as fuel and the fire is not left unattended until extinguished.
- (d) On-site burning of agricultural wastes as part of a valid agricultural operation on contiguous agricultural lands larger than five acres actively devoted to agricultural or horticultural use, provided such waste is actually grown or generated on those lands and such waste is capable of



being fully burned within a 24-hour period.

(e) The use of liquid petroleum fueled smudge pots to prevent frost damage to crops.

(f) Ceremonial or celebratory bonfires where not otherwise prohibited by law, provided that only untreated wood or other agricultural products are used as fuel and the fire is not left unattended until extinguished.

(g) Small fires that are used to dispose of a flag or religious item, and small fires or other smoke producing process where not otherwise prohibited by law that are used in connection with a religious ceremony.

(h) Burning on an emergency basis of explosive or other dangerous or contraband materials by police or other public safety organization.

(i) Prescribed burns performed according to Part 194 of this Title.

(j) Fire training, including firefighting, fire rescue, and fire/arson investigation training, performed under applicable rules and guidelines of the New York State Department of State's Office of Fire Prevention and Control. For fire training performed on acquired structures, the structures must be emptied and stripped of any material that is toxic, hazardous or likely to emit toxic smoke (such as asbestos, asphalt shingles and vinyl siding or other vinyl products) prior to burning and must be at least 300 feet from other occupied structures. No more than one structure per lot or within a 300 foot radius (whichever is bigger) may be burned in a training exercise.

(k) Individual open fires as approved by the Director of the Division of Air Resources as may be required in response to an outbreak of a plant or animal disease upon request by the commissioner of the Department of Agriculture and Markets, or for the destruction of invasive plant and insect species.

(l) Individual open fires that are otherwise authorized under the environmental conservation law, or by rule or regulation of the Department.

**MANDATORY FEDERALLY ENFORCEABLE PERMIT CONDITIONS  
SUBJECT TO ANNUAL CERTIFICATIONS ONLY IF APPLICABLE**

**The following federally enforceable permit conditions are mandatory for all Title V permits and are subject to annual compliance certification requirements only if effectuated during the reporting period.**

**[NOTE: The corresponding annual compliance certification for those conditions not effectuated during the reporting period shall be specified as "not applicable".]**

**Condition 11: Maintenance of Equipment  
Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 200.7**

**Item 11.1:**

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.

**Condition 12: Recycling and Salvage  
Effective between the dates of 02/09/2010 and 02/08/2015**



**Applicable Federal Requirement:6 NYCRR 201-1.7**

**Item 12.1:**

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 the ECL.

**Condition 13: Prohibition of Reintroduction of Collected Contaminants to the air**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 201-1.8**

**Item 13.1:**

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.

**Condition 14: Exempt Sources - Proof of Eligibility**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 201-3.2 (a)**

**Item 14.1:**

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 this Subpart. 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 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.

**Condition 15: Trivial Sources - Proof of Eligibility**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 201-3.3 (a)**

**Item 15.1:**

The owner and/or operator of an emission source or unit that is listed as being trivial in this Part may be required to certify that it operates within the specific criteria described in this Subpart. 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 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.

**Condition 16: Standard Requirement - Provide Information**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 201-6.5 (a) (4)**



**Item 16.1:**

The owner and/or operator shall furnish to the department, within a reasonable time, any information that the department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the department copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to the administrator along with a claim of confidentiality, if the administrator initiated the request for information or otherwise has need of it.

**Condition 17: General Condition - Right to Inspect**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 201-6.5 (a) (8)**

**Item 17.1:**

The department or an authorized representative shall be allowed upon presentation of credentials and other documents as may be required by law to:

(i) enter upon the permittee's premises where a facility subject to the permitting requirements of this Subpart is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(ii) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

(iii) inspect at reasonable times any emission sources, equipment (including monitoring and air pollution control equipment), practices, and operations regulated or required under the permit; and

(iv) sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

**Condition 18: Standard Requirements - Progress Reports**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 201-6.5 (d) (5)**

**Item 18.1:**

Progress reports consistent with an applicable schedule of compliance are to be submitted at least semiannually, or at a more frequent period if specified in the applicable requirement or by the department. Such progress reports shall contain the following:

(i) dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

(ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

**Condition 19: Off Permit Changes**  
**Effective between the dates of 02/09/2010 and 02/08/2015**





**Applicable Federal Requirement:6 NYCRR 201-6.5 (f) (6)**

**Item 19.1:**

No permit revision will be required for operating changes that contravene an express permit term, provided that such changes would not violate applicable requirements as defined under this Part or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting, or compliance certification permit terms and conditions. Such changes may be made without requiring a permit revision, if the changes are not modifications under any provision of title I of the act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions) provided that the facility provides the administrator and the department with written notification as required below in advance of the proposed changes within a minimum of seven days. The facility owner or operator, and the department shall attach each such notice to their copy of the relevant permit.

(i) For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

(ii) The permit shield described in section 6 NYCRR 201-6.6 shall not apply to any change made pursuant to this paragraph.

**Condition 20: Required Emissions Tests**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 202-1.1**

**Item 20.1:**

For the purpose of ascertaining compliance or non-compliance with any air pollution control code, rule or regulation, the commissioner may require the person who owns such air contamination source to submit an acceptable report of measured emissions within a stated time. Such person shall bear the cost of measurement and preparing the report of measured emissions. Failure of such person to submit a report acceptable to the commissioner within the time stated shall be sufficient reason for the commissioner to suspend or deny a certificate to operate.

**Condition 21: Visible Emissions Limited**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 211.3**

**Item 21.1:**

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 22: Accidental release provisions.**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:40 CFR Part 68**

**Item 22.1:**

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If a chemical is listed in Tables 1,2,3 or 4 of 40 CFR §68.130 is present in a process in quantities greater than the threshold quantity listed in Tables 1,2,3 or 4, the following requirements will apply:

- a) The owner or operator shall comply with the provisions of 40 CFR Part 68 and;
- b) The owner or operator shall submit at the time of permit issuance (if not previously submitted) one of the following, if such quantities are present:
  - 1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR §68.10(a) or,
  - 2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan. Information should be submitted to:

Risk Management Plan Reporting Center  
C/O CSC  
8400 Corporate Dr  
Carrollton, Md. 20785

**Condition 23: Recycling and Emissions Reduction**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:40CFR 82, Subpart F**

**Item 23.1:**

The permittee shall comply with all applicable provisions of 40 CFR Part 82.

**Condition 24: 40 CFR Part 82 - Applicability**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:40CFR 82, Subpart F**

**Item 24.1:**

This facility is subject to the requirements of 40 CFR 60 Part 82.

**The following conditions are subject to annual compliance certification requirements for Title V permits only.**

**Condition 25: Emission Unit Definition**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR Subpart 201-6**

**Item 25.1:**

The facility is authorized to perform regulated processes under this permit for:  
Emission Unit: 0-00002



Emission Unit Description:

Calcined and uncalcined materials are fed into a series of furnaces, heated into a slagged material, crushed, screened, and fed through a second stage calciner, screened, blended, pulverized and discharged for final product pack out.

Building(s): 0000000008  
0000000010  
0000000011  
0000000018  
0000000115  
0000000123  
0000000134  
0000000137  
0000000143  
0000000145  
0000000162

**Item 25.2:**

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

Emission Unit: 0-00003

Emission Unit Description:

Calcined and uncalcined materials are milled (8 x 12 mill) and discharged for pack out or sent on for further processing.

Building(s): 0000000123

**Item 25.3:**

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

Emission Unit: 0-00004

Emission Unit Description:

Raw materials consisting of rutile, soda ash and pot ash are mixed and fed through the PT calciner, milled, classified and screened for final pack out.

Building(s): 0000000017

**Item 25.4:**

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

Emission Unit: 0-00005

Emission Unit Description:

Uncalcined materials are dry milled, mixed with water to form a slurry, then fed through a series of wet mills and holding tanks. The slurry is then calcined, milled and screened for the final product which is discharged for final packout.

Building(s): 0000000008  
0000000013



**Item 25.5:**

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

Emission Unit: 0-00006

Emission Unit Description:

This emission unit includes those processes associated with the production of high purity barium titanate (HPB), HPB tamtrons, and various dielectric products. The HPB & HPB tamtrons process equipment includes a series of mix and process tanks, electric calciners, a filter press, blenders, and jet mills which lead to a final packout.

This emission unit also includes dielectric products which are produced using a series of mixing, milling, calcining, drying, blending, screening and associated material handling equipment leading to final packout.

Building(s): 0000000002  
0000000147  
0000000158  
0000000159  
0000000163

**Condition 26: Compliance Certification**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 201-6.5 (f)**

**Item 26.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 26.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

TAM Ceramics LLC produces ceramic materials for resale and use in other forms of manufacturing. The processes employed include arc furnacing, milling, calcining, and mixing. The primary products manufactured are zirconium silicate, zirconium oxide, titanium oxide, sodium titanate, potassium titanate, calcium carbide with silicates, silicates with fluorides, aluminum oxides, and dielectric powders primarily manufactured from barium titanate. The facility emits particulate emissions and nitrogen oxides(NOx) each in excess of 100 ton per year and is therefore a major source subject to Title V permitting requirements. Additional contaminants emitted include carbon monoxide(CO), sulfur dioxide(SO2), volatile organic compounds(VOC), and various hazardous air pollutants(HAP).

This protocol will allow the facility to evaluate the addition of new emission sources, modification of existing



emission sources, and the emission of new contaminants with respect to potential new applicable requirements and to comply with those requirements without re-opening the Title V permit. Examples of potential changes which would be allowed under this protocol are the addition of new processing lines, crushers, screeners, and fabric filter collectors.

Notifications:

Prior to making changes under the terms of this flexibility protocol, Ferro will notify this Department in writing 14 days prior and will include all information necessary to substantiate that the changes are consistent with this protocol and will ensure compliance with all applicable requirements. The information to be submitted includes but is not limited to: a description of the changes to be made; the addition or modification of process and control equipment; the specific contaminants to be emitted; calculations of emission rate potentials and potential to emit based on AP-42 emission factors, stack tests, and/or material balance; and an Air Guide-1 analysis to demonstrate to demonstrate potential health impacts.

If the submission of this information demonstrates that the changes to be made are not consistent with the terms of this protocol, then the Department will require a permit modification to be submitted.

Recordkeeping:

TAM shall maintain records of all modifications made under this flexibility protocol. These modifications will be incorporated into the Title V permit at the time of renewal.

Evaluation of Particulate Emissions-212.4(c):

In order to demonstrate compliance with the particulate emission limits of 6NYCRR, Part 212.4(c). The non-HAP particulate emission rate potential (ERP) will be calculated from new or modified existing sources using mass balance, engineering estimates, or AP-42 emission factors. If the ERP exceeds 0.05 grains per dscf, then particulate control equipment such as either a fabric filter, high-efficiency cyclone, or scrubber will be required. Prior to the start-up of the new or modified equipment, calculations must demonstrate that the control efficiency will be sufficient to ensure compliance with the standard. A stack test may be required to demonstrate



compliance with the emission limit.

Particulate emissions from a potential project shall be evaluated in terms of PM-10 and PM 2.5 emissions. All measured or estimated PM-10 emissions will be assumed PM-2.5. If PM-10 emissions from the project do not equal or exceed 15 tons per year, then the PM-2.5 impacts from the project shall be considered insignificant, no further assessment required and the change will be allowed under the terms of this protocol.

Non-HAP VOCs:

ERP > 10 pounds per hour and less than 100 pounds per hour, will result in a minimum rating of "B" and require a minimum of 91% control of these emissions. An Air Guide-1 analysis of emissions will be conducted to determine if that level of control is sufficient. If a Best Available Control Technology (BACT) analysis or a variance is required, the change will not be allowed under the terms of this flexibility protocol and a permit modification will be required.

Non-HAP or non-VOC:

TAM will provide a minimum of 75% control for ERP greater than 10 and less than 100 pounds per hour. An Air Guide-1 analysis of emissions will be conducted to determine if that level of control is sufficient.

General VOC and NOx:

The emission of VOC and NOx from the modification of existing sources or the addition of new sources must be evaluated for the applicability of New Source Review (NSR) for non-attainment areas and Prevention of Significant Deterioration (PSD) for attainment areas and 6NYCRR<Part 212.10 Reasonably Available Control Technology (RACT) requirements. If applicability is determined or an emissions cap is required to limit potential emissions below the major source threshold, then the change will not be allowed under the terms of this protocol.

Hazardous air pollutants:

Hazardous air pollutants are defined as listed in 6NYCRR, Part 200.1(ag). For emissions of these contaminants, a calculated ERP > 1 pound per hour, will result in an "A" environmental rating and require a minimum of 99% control of emissions and installation of appropriate emission control equipment to achieve that level. An Air Guide-1 analysis of emissions will be conducted to determine if



that level of control from existing or new equipment is sufficient. If it is not sufficient, then additional control equipment will be required. If a BACT analysis or a variance is required, the change will not be allowed under the terms of this flexibility protocol and a permit modification will be required.

The facility shall also make a determination as to whether there are any applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements which may affect the proposed process. If applicability is determined and control technology or an emissions cap is required to limit potential emissions below the major source threshold, then the change will not be allowed under the terms of this protocol.

**Trivial and Exempt Emission Sources:**

The facility may add exempt and trivial activities pursuant to 6NYCRR, Part 201-3 as long as the facility maintains records to demonstrate that the emission source(s) is being operated consistent with the stated exemption. The addition of these sources also must be evaluated with respect to PSD/NSR applicability and the provisions set forth in this flexibility protocol prior to the construction of these sources. Emissions from exempt and trivial activities are to be included in calculations to determine major source applicability.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 27: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR Part 212**

**Item 27.1:**

The Compliance Certification activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 27.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:



Implementation of a routine baghouse control equipment inspection, maintenance, and recordkeeping plan as detailed in Attachment B and summarized below in order to ensure compliance with the particulate emission limits of 6NYCRR, Part 212.3(b) and 6NYCRR, Part 212.4(c). The inspection will occur as noted below or as a result of a visible emissions evaluation.

The magnehelic range will be established each time the filter bags are changed and entered on to the baghouse inspection form. The pressure drop(delta P) across the fabric filter control device will be monitored and recorded daily. Readings outside established normal operating ranges will require that inspection and maintenance procedures be implemented to ensure continuous compliance.

Daily:

Each day that process is operational baghouses will be inspected as follows:

1. Visual inspection of magnehelic, baghouse and discharge stack.

-Differential pressure readings will be monitored and recorded daily noting date and summary of necessary repairs if required.

-If continuous stack emissions are observed, a check to determine the physical integrity of the bags, assemblies, gasketing, housing and other fittings, and correct bag installation.

-If dust is observed after bag pulse, check the header pressure, pulse frequency and duration, shake cycle time to verify that the baghouse is operating within manufacturers' recommendations.

-Check filter bags for excessive wear

-check clean air plenum for residual dust and as needed lean air plenum and bag cage assemblies to remove residual dust.

Weekly/Between Production Runs:

Visual inspection of bags and supporting cages and appurtenances for physical integrity including:

-Holes, rips,tears, and signs of excessive wear





- Loose or missing gaskets, fittings, bolts or assemblies
- Blockage or bag cages intact

If results of visual inspection and differential pressure readings indicate a problem which requires immediate attention (i.e. torn or ripped bags), the baghouse will be taken off line to implement repairs.

If the inspection indicates a potential problem (i.e. worn bags, steadily increasing differential pressure) that does not pose an immediate risk to the integrity of the baghouse system, maintenance will be performed after the associated processing operations are completed and prior to restarting the baghouse.

**Recordkeeping:**

An daily inspection/maintenance log will be completed by each department and include magnehelic readings, required repairs and date of repair completion. Records are to be kept on-site for a period of 5 years.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 28: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 212.6 (a)**

**Item 28.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 28.2:**

Compliance Certification 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 from each emission point at the entire facility. If any visible emissions are identified, corrective

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action is required as per the attached inspection and maintenance plans identified as Attachments B,C,D, and E. 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: Method 9
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING

DESCRIPTION
Averaging Method: 6 MINUTE AVERAGE
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 7/30/2010.
Subsequent reports are due every 6 calendar month(s).

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

Condition 29: Emission Point Definition By Emission Unit
Effective between the dates of 02/09/2010 and 02/08/2015

Applicable Federal Requirement:6 NYCRR Subpart 201-6

Item 29.1:

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

Emission Unit: 0-00002

Emission Point: 00201

Height (ft.): 53 Length (in.): 738 Width (in.): 36
NYTMN (km.): 4783.095 NYTME (km.): 171.63 Building: 0000000162

Emission Point: 00202

Height (ft.): 29 Diameter (in.): 38
NYTMN (km.): 4783.095 NYTME (km.): 171.63 Building: 0000000137

Emission Point: 00203

Height (ft.): 32 Length (in.): 24 Width (in.): 18
NYTMN (km.): 4783.095 NYTME (km.): 171.63 Building: 0000000143

Emission Point: 00204

Height (ft.): 14 Diameter (in.): 20
NYTMN (km.): 4783. NYTME (km.): 171.5 Building: 0000000115

Emission Point: 00205

Height (ft.): 36 Diameter (in.): 14
NYTMN (km.): 4783.095 NYTME (km.): 171.63 Building: 0000000143

Emission Point: 00206

Height (ft.): 38 Diameter (in.): 15

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NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000123
Emission Point: 00207		
Height (ft.): 34	Diameter (in.): 10	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000143
Emission Point: 00208		
Height (ft.): 46	Diameter (in.): 12	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000011
Emission Point: 00209		
Height (ft.): 46	Diameter (in.): 16	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000011
Emission Point: 00210		
Height (ft.): 27	Diameter (in.): 18	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000008
Emission Point: 00211		
Height (ft.): 40	Diameter (in.): 12	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000143
Emission Point: 00212		
Height (ft.): 20	Diameter (in.): 10	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000018
Emission Point: 00213		
Height (ft.): 27	Diameter (in.): 18	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000008
Emission Point: 00214		
Height (ft.): 38	Diameter (in.): 30	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000145
Emission Point: 00215		
Height (ft.): 38	Diameter (in.): 30	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000145
Emission Point: 00216		
Height (ft.): 27	Diameter (in.): 9	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000123
Emission Point: 00217		
Height (ft.): 11	Diameter (in.): 36	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000115

**Item 29.2:**

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

Emission Unit: 0-00003

Emission Point: 00301

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Height (ft.): 40                      Diameter (in.): 12  
NYTMN (km.): 4783.095    NYTME (km.): 171.63      Building: 0000000123

**Item 29.3:**

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

Emission Unit: 0-00004

Emission Point: 00401

Height (ft.): 41                      Diameter (in.): 23  
NYTMN (km.): 4783.095    NYTME (km.): 171.63      Building: 0000000017

Emission Point: 00402

Height (ft.): 30                      Diameter (in.): 8  
NYTMN (km.): 4783.095    NYTME (km.): 171.63      Building: 0000000017

**Item 29.4:**

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

Emission Unit: 0-00005

Emission Point: 00501

Height (ft.): 51                      Diameter (in.): 29  
NYTMN (km.): 4783.095    NYTME (km.): 171.63      Building: 0000000008

Emission Point: 00502

Height (ft.): 39                      Diameter (in.): 12  
NYTMN (km.): 4783.095    NYTME (km.): 171.63      Building: 0000000008

Emission Point: 00503

Height (ft.): 37                      Diameter (in.): 15  
NYTMN (km.): 4783.095    NYTME (km.): 171.63      Building: 0000000013

**Item 29.5:**

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

Emission Unit: 0-00006

Emission Point: 00601

Height (ft.): 51                      Diameter (in.): 30  
NYTMN (km.): 4783.095    NYTME (km.): 171.63      Building: 0000000002

Emission Point: 00602

Height (ft.): 51                      Diameter (in.): 30  
NYTMN (km.): 4783.095    NYTME (km.): 171.63      Building: 0000000002

Emission Point: 00603

Height (ft.): 46                      Diameter (in.): 13  
NYTMN (km.): 4783.095    NYTME (km.): 171.63      Building: 0000000002

Emission Point: 00604

Height (ft.): 37                      Diameter (in.): 12

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NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00606		
Height (ft.): 16	Diameter (in.): 10	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000147
Emission Point: 00607		
Height (ft.): 36	Diameter (in.): 12	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00608		
Height (ft.): 20	Diameter (in.): 8	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000147
Emission Point: 00609		
Height (ft.): 20	Diameter (in.): 10	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000147
Emission Point: 00610		
Height (ft.): 12	Diameter (in.): 11	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000147
Emission Point: 00611		
Height (ft.): 30	Length (in.): 16	Width (in.): 12
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00612		
Height (ft.): 18	Diameter (in.): 8	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000147
Emission Point: 00613		
Height (ft.): 30	Diameter (in.): 6	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00614		
Height (ft.): 30	Diameter (in.): 6	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00617		
Height (ft.): 24	Diameter (in.): 36	
NYTMN (km.): 4783.	NYTME (km.): 171.6	Building: 0000000002
Emission Point: 00618		
Height (ft.): 20	Diameter (in.): 10	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00619		
Height (ft.): 36	Diameter (in.): 24	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000163
Emission Point: 00620		
Height (ft.): 10	Diameter (in.): 12	

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Facility DEC ID: 9293000032



NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00621		
Height (ft.): 20	Diameter (in.): 8	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00622		
Height (ft.): 14	Diameter (in.): 8	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00623		
Height (ft.): 37	Diameter (in.): 20	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000147
Emission Point: 00624		
Height (ft.): 19	Diameter (in.): 12	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00625		
Height (ft.): 35	Diameter (in.): 15	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000147
Emission Point: 00627		
Height (ft.): 3	Diameter (in.): 3	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000158
Emission Point: 00629		
Height (ft.): 23	Diameter (in.): 3	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000159
Emission Point: 00631		
Height (ft.): 30	Diameter (in.): 6	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00632		
Height (ft.): 46	Diameter (in.): 8	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00633		
Height (ft.): 37	Diameter (in.): 6	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00634		
Height (ft.): 10	Diameter (in.): 24	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00635		
Height (ft.): 30	Diameter (in.): 2	
NYTMN (km.): 4783.095	NYTME (km.): 171.63	Building: 0000000002
Emission Point: 00637		
Height (ft.): 23	Diameter (in.): 3	

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NYTMN (km.): 4783.095 NYTME (km.): 171.63 Building: 0000000002

Emission Point: 00638

Height (ft.): 10

Diameter (in.): 24

NYTMN (km.): 4783.095 NYTME (km.): 171.63 Building: 0000000002

**Condition 30: Process Definition By Emission Unit  
Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR Subpart 201-6**

**Item 30.1:**

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

Emission Unit: 0-00002

Process: B01

Source Classification Code: 3-05-999-99

**Process Description:**

Three high temperature submersion carbon electric arc furnaces (#9, #10, & # 11) used for the smelting of zirconium silicate into high purity zircon. Amorphous silica fume dust (SiO2) is released as a result of the smelting operation. Emissions from the three furnaces are exhausted to a single baghouse and then to the atmosphere thru emission point 00201. Collected silica is primarily sold for off-site re-use.

Emission Source/Control: 20100 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21700 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 20101 - Process

Emission Source/Control: 20102 - Process

Emission Source/Control: 20103 - Process

**Item 30.2:**

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

Emission Unit: 0-00002

Process: B02

Source Classification Code: 3-05-150-02

**Process Description:**

Rotary gas fired 7 x 40 calciner. Emissions associated with natural gas combustion by products, along with dust generated during calcining, are exhausted through a gravity settling chamber and then to a baghouse(emission point 00202).

Emission Source/Control: 20200 - Control  
Control Type: FABRIC FILTER



Emission Source/Control: 20201 - Control  
Control Type: GRAVITY COLLECTOR

Emission Source/Control: 20202 - Process

**Item 30.3:**

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

Emission Unit: 0-00002  
Process: B03 Source Classification Code: 3-05-150-02  
Process Description:  
Rotary gas fired 6 x 60 calciner and associated cooling system. Emissions associated with natural gas combustion by products along with generated dust are exhausted to a cyclone and through emission point 00203.

Emission Source/Control: 20300 - Control  
Control Type: SINGLE CYCLONE

Emission Source/Control: 20301 - Process

**Item 30.4:**

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

Emission Unit: 0-00002  
Process: B04 Source Classification Code: 3-99-999-98  
Process Description:  
Organics volatilized during the carbon furnace bottom bake out process are exhausted through the calciner and associated cyclone and emission point 00203. No emissions control is provided by the cyclone. The calciner is not required to be operational during the furnace bake out process.

Emission Source/Control: 20300 - Control  
Control Type: SINGLE CYCLONE

Emission Source/Control: 20302 - Process

**Item 30.5:**

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

Emission Unit: 0-00002  
Process: B05 Source Classification Code: 3-05-999-99  
Process Description:  
A single three phase high temperature carbon arc furnace used for the smelting of zirconium silicate. Amorphous silica (SiO<sub>2</sub>) is released from the process. Emissions from the furnace are exhausted to a baghouse (emission point 00204) for collection of generated silica and emissions control.





Emission Source/Control: 20400 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 20401 - Process

**Item 30.6:**

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

Emission Unit: 0-00002  
Process: B06 Source Classification Code: 3-05-150-03  
Process Description:  
Dust generated from the pulverizer (hammer mill) and associated materials handling system is exhausted to a baghouse(emission point 00205).

Emission Source/Control: 20500 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 20501 - Process

**Item 30.7:**

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

Emission Unit: 0-00002  
Process: B07 Source Classification Code: 3-05-150-03  
Process Description:  
Mechanical dry mill and associated material handling system. Generated dust is exhausted to a baghouse(emission point 206).

Emission Source/Control: 20600 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 20601 - Process

**Item 30.8:**

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

Emission Unit: 0-00002  
Process: B08 Source Classification Code: 3-05-150-03  
Process Description:  
Generated dust from the mechanical 8 x 8 dry mill and associated material handling systems is exhausted to a baghouse(emission point 00207).

Emission Source/Control: 20700 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 20701 - Process

**Item 30.9:**



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

Emission Unit: 0-00002  
Process: B09 Source Classification Code: 3-05-150-03  
Process Description:  
Generated dust from the crushing/screening system in Building 11 used for size reduction and associated materials handling system is exhausted to a baghouse(emission point 00208).

Emission Source/Control: 20800 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 20801 - Process

**Item 30.10:**

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

Emission Unit: 0-00002  
Process: B10 Source Classification Code: 3-05-150-03  
Process Description:  
Crushing/screening system in Building 11 used for size reduction and associated materials handling system. Generated dust from crushers, screens, and material handling equipment is exhausted to a baghouse(emission point 00209).

Emission Source/Control: 20900 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 20901 - Process

**Item 30.11:**

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

Emission Unit: 0-00002  
Process: B11 Source Classification Code: 3-05-150-03  
Process Description:  
Generated dust from the crushing/screening system in Building 8 used for size reduction and associated materials handling system is exhausted to a baghouse(emission point 00210).

Emission Source/Control: 21000 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21001 - Process

**Item 30.12:**

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

Emission Unit: 0-00002



Process: B12 Source Classification Code: 3-05-150-01

Process Description:

Dusts generated from the materials handling system associated with the transfer into and from storage bins and associated with the transfer to the 6 x 60 calciner located in Building 143 are exhausted to a baghouse. It also includes a blending system for materials prior to discharge into the calciner(emission point 00211).

Emission Source/Control: 21100 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21101 - Process

**Item 30.13:**

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

Emission Unit: 0-00002

Process: B13 Source Classification Code: 3-05-150-05

Process Description:

Dust generated from the materials blending system and associated materials handling equipment located in Building 18 is exhausted to a baghouse(emission point 00212).

Emission Source/Control: 21200 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21201 - Process

**Item 30.14:**

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

Emission Unit: 0-00002

Process: B14 Source Classification Code: 3-05-150-04

Process Description:

Dust generated from the secondary screening system (Derrick screen)operated in conjunction with a crushing/screening system (process B09) is exhausted to a baghouse(emission point 00213).

Emission Source/Control: 21300 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21301 - Process

**Item 30.15:**

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

Emission Unit: 0-00002

Process: B15 Source Classification Code: 3-05-150-05

Process Description:

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Facility DEC ID: 9293000032



Dust generated from the materials blending system and associated materials handling equipment located in Building 8 is exhausted to a baghouse emission point 00213.

Emission Source/Control: 21300 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21301 - Process

**Item 30.16:**

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

Emission Unit: 0-00002  
Process: B16 Source Classification Code: 3-05-999-99  
Process Description:

Two magnetic separators used to separate magnetic and non magnetic materials as part of the ceramics processing operation. Dust generated as a result of material transfers in the process is exhausted to a baghouse emission point 00213.

Emission Source/Control: 21300 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21302 - Process

**Item 30.17:**

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

Emission Unit: 0-00002  
Process: B17 Source Classification Code: 3-05-150-03  
Process Description:

Crushing/screening system for furnace slag. Large pieces of slag are crushed and screened as part of the initial size reduction processing of the material. Generated dust associated with the crushing, screening, and material handling systems is exhausted through two similar baghouses (emission points 00214 and 00215).

Emission Source/Control: 21406 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21500 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21401 - Process

Emission Source/Control: 21402 - Process

**Item 30.18:**

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



Emission Unit: 0-00002  
Process: B19 Source Classification Code: 3-05-150-04  
Process Description:  
Materials handling equipment, a cooler, and storage bins associated with the 7 x 40 calciner. Dust generated during material handling and cooling of calcined material is exhausted to a baghouse(emission point 00202).

Emission Source/Control: 20200 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 20203 - Process

**Item 30.19:**

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

Emission Unit: 0-00002  
Process: B21 Source Classification Code: 3-05-999-99  
Process Description:  
Magnetic separator for a material drying/mixing system. Generated dust is exhausted to two similar baghouses emission point 00216.

Emission Source/Control: 21406 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21500 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21404 - Process

**Item 30.20:**

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

Emission Unit: 0-00002  
Process: B23 Source Classification Code: 3-05-150-03  
Process Description:  
Process consists of a screening system (Derrick Screen) used for the size reduction of material. Dust is exhausted to a baghouse.

Emission Source/Control: 21500 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21407 - Process

**Item 30.21:**

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

Emission Unit: 0-00002  
Process: B24 Source Classification Code: 3-05-150-03

New York State Department of Environmental Conservation

Permit ID: 9-2930-00032/00263

Facility DEC ID: 9293000032



Process Description:

This process consists of a material blending system used to dry wet material (sand and processed zirconia tailings) by rotating a former concrete mix tank. The material dries by friction. Generated dust from the loading and discharge of the material is exhausted to two similar baghouses.

Emission Source/Control: 21406 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21500 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 21800 - Process

**Item 30.22:**

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

Emission Unit: 0-00003

Process: C01

Source Classification Code: 3-05-150-03

Process Description:

Generated dust from the mechanical 8 x 10 dry mill and the associated material handling system is exhausted to a baghouse(emission point 00301).

Emission Source/Control: 30100 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 30101 - Process

**Item 30.23:**

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

Emission Unit: 0-00004

Process: D01

Source Classification Code: 3-05-150-02

Process Description:

Gas fired rotary calciner. Emissions associated with natural gas combustion by products, along with dust generated during calcining, are exhausted to a cyclone and then to a baghouse(emission point 00401).

Emission Source/Control: 40100 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 40102 - Control  
Control Type: SINGLE CYCLONE

Emission Source/Control: 40101 - Process

**Item 30.24:**

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



Emission Unit: 0-00004  
Process: D02 Source Classification Code: 3-05-150-03

Process Description:  
Mechanical dry mill, classifying system, and associated materials handling equipment. Generated dust from milling, classifying, and materials handling is exhausted to a baghouse(emission point 00402).

Emission Source/Control: 40200 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 40201 - Process

**Item 30.25:**

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

Emission Unit: 0-00004  
Process: D03 Source Classification Code: 3-05-150-03

Process Description:  
Emissions from the Hammer mill and associated materials handling system are exhausted to a baghouse(emission point 00402).

Emission Source/Control: 40200 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 40202 - Process

**Item 30.26:**

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

Emission Unit: 0-00004  
Process: D04 Source Classification Code: 3-05-150-05

Process Description:  
A mixer, cooler, and materials handling equipment associated with the Building 17 calciner. Emissions associated with dust generated during mixing, cooling, and material handling are exhausted to a cyclone and then to a baghouse(emission point 00401).

Emission Source/Control: 40100 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 40102 - Control  
Control Type: SINGLE CYCLONE

Emission Source/Control: 40103 - Process

**Item 30.27:**

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



Emission Unit: 0-00005  
Process: E01 Source Classification Code: 3-05-150-02

Process Description:  
Gas fired rotary calciner(7 X 70) and associated cooling system. Emissions of particulates, sulfur dioxide, nitrogen oxides and carbon monoxide associated with natural gas combustion by-products along with generated dust are exhausted via natural draft through a settling chamber and into the atmosphere thru emission point 00501.

Emission Source/Control: 50100 - Control  
Control Type: GRAVITY COLLECTOR

Emission Source/Control: 50101 - Process

**Item 30.28:**

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

Emission Unit: 0-00005  
Process: E02 Source Classification Code: 3-05-150-03

Process Description:  
Dust from the mechanical 8 x 8 dry mill, the 7 x 70 calciner cooler, and associated material handling systems located in Building 8 is exhausted to a baghouse and to atmosphere thru emission point 00502.

Emission Source/Control: 50200 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 50201 - Process

**Item 30.29:**

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

Emission Unit: 0-00005  
Process: E03 Source Classification Code: 3-05-150-03

Process Description:  
Particulates from the mechanical 7 x 10 dry mill and material handling system located in Building 13 is exhausted to a baghouse and to atmosphere thru emission point 00503.

Emission Source/Control: 50300 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 50301 - Process

**Item 30.30:**

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

Emission Unit: 0-00006





Process: F01 Source Classification Code: 3-05-150-02

Process Description:

Emissions from the gas fired 6 x 60 rotary calciner (natural gas combustion by-products and generated dust) located in Building 2 are exhausted via natural draft through a settling chamber and exhausts through emission point 00601.

Emission Source/Control: 60100 - Control  
Control Type: GRAVITY COLLECTOR

Emission Source/Control: 60101 - Process

**Item 30.31:**

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

Emission Unit: 0-00006

Process: F02 Source Classification Code: 3-05-150-02

Process Description:

Emissions from the gas fired 6x50 rotary calciner (natural gas combustion by-products and generated dust) located in Building 2 are exhausted via natural draft through a settling chamber and exhausted through emission point 00602.

Emission Source/Control: 60200 - Control  
Control Type: GRAVITY COLLECTOR

Emission Source/Control: 60201 - Process

**Item 30.32:**

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

Emission Unit: 0-00006

Process: F03 Source Classification Code: 3-05-150-04

Process Description:

Material handling system associated with a belt dryer. The material handling system includes grinding equipment used for size reduction prior to final transfer of the material from the system. Dust generated from the system is exhausted to a baghouse. The product collector (Torit baghouse) discharges to emission point 00603.

Emission Source/Control: 60300 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 63200 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 60301 - Process

**Item 30.33:**



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

Emission Unit: 0-00006  
Process: F04 Source Classification Code: 3-05-150-04

Process Description:  
Material handling system associated with a twin drum dryer includes grinding equipment used for size reduction prior to final transfer of the material from the system. Dust generated from the system is exhausted to a baghouse. The product collector (Torit baghouse) discharges to emission point 00604.

Emission Source/Control: 60400 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 63300 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 60401 - Process

**Item 30.34:**

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

Emission Unit: 0-00006  
Process: F06 Source Classification Code: 3-05-150-03

Process Description:  
Material is fed into the 20 " jet mill located in Building 147 and ground to a very fine particle size using high pressure air. Ground material is discharged directly into a product collector (baghouse) which discharges product into a hopper. Emissions are vented through the baghouse to emission point 00606.

Emission Source/Control: 60600 - Control  
Control Type: GRAVITY COLLECTOR

Emission Source/Control: 60601 - Process

**Item 30.35:**

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

Emission Unit: 0-00006  
Process: F07 Source Classification Code: 3-05-150-03

Process Description:  
Dust generated from the pulverizer (hammer mill) and associated material handling equipment located in Building 2 is exhausted to a baghouse and emission point 00607.

Emission Source/Control: 60700 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 60701 - Process



**Item 30.36:**

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

Emission Unit: 0-00006  
Process: F08 Source Classification Code: 3-05-150-03

Process Description:

A 20" jet mill located in Building 147. Material is fed into the mill and ground to a very fine particle size using high pressure air. Ground material is discharged directly into a product collector (baghouse) which discharges product into a hopper. Emissions from the jet mill are vented through the baghouse product collector to emission point 00608.

Emission Source/Control: 60800 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 60801 - Process

**Item 30.37:**

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

Emission Unit: 0-00006  
Process: F09 Source Classification Code: 3-05-150-03

Process Description:

A 20" jet mill located in Building 147. Material is fed into the mill and ground to a very fine particle size using high pressure air. Ground material is discharged directly into a product collector (baghouse) which discharges product into a hopper. Emissions from the jet mill are vented through the baghouse product collector to the atmosphere thru emission point 00609..

Emission Source/Control: 60900 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 60901 - Process

**Item 30.38:**

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

Emission Unit: 0-00006  
Process: F10 Source Classification Code: 3-05-150-03

Process Description:

Discharge hoppers for four jet mills located in Building 147. Material discharged from the product collector is dropped into a hopper. Dust generated from transfer of jet-milled material into each hopper is exhausted to a single baghouse (emission point 00610).

Emission Source/Control: 61000 - Control



Control Type: FABRIC FILTER

Emission Source/Control: 61001 - Process

Emission Source/Control: 61002 - Process

Emission Source/Control: 61003 - Process

Emission Source/Control: 61004 - Process

**Item 30.39:**

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

Emission Unit: 0-00006

Process: F11

Source Classification Code: 3-05-150-04

Process Description:

Dust generated the filling and discharging of material from two blenders located in Building 147 is exhausted to a single baghouse(emission point 00610).

Emission Source/Control: 61000 - Control

Control Type: FABRIC FILTER

Emission Source/Control: 61005 - Process

Emission Source/Control: 61006 - Process

**Item 30.40:**

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

Emission Unit: 0-00006

Process: F12

Source Classification Code: 3-05-150-03

Process Description:

A 24" jet mill located in Building 2. Material is fed into the mill and ground to a very fine particle size using high pressure air. Ground material is discharged directly into a product collector (baghouse) which discharges product into a hopper. Emissions from the jet mill are vented through the baghouse product collector (emission point 00611).

Emission Source/Control: 61100 - Control

Control Type: FABRIC FILTER

Emission Source/Control: 61101 - Process

**Item 30.41:**

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

Emission Unit: 0-00006

Process: F13

Source Classification Code: 3-05-150-03

Process Description:





weighing of product hoppers is exhausted to a baghouse.

Emission Source/Control: 61400 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 61007 - Process

**Item 30.45:**

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

Emission Unit: 0-00006  
Process: F17 Source Classification Code: 3-05-150-05  
Process Description:

Exhaust fan for control of dust during a batch mixing operation associated with the 6 x 60 calciner located in building 2. Material and a small volume of water is added to a mixer and the blended material is conveyed directly to the calciner. Generated dust is exhausted directly to the atmosphere.

Emission Source/Control: 61702 - Process

**Item 30.46:**

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

Emission Unit: 0-00006  
Process: F18 Source Classification Code: 3-05-150-05  
Process Description:

Local exhaust for two mix tanks. Dust generated from the addition of solid material to the mix tanks is exhausted from the tank to the baghouse.

Emission Source/Control: 63100 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 63102 - Process

**Item 30.47:**

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

Emission Unit: 0-00006  
Process: F19 Source Classification Code: 3-05-150-05  
Process Description:

Dust generated from the addition of solid material to mix tank #3 is exhausted to a fabric filter and then to emission point 00618.

Emission Source/Control: 61800 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 61801 - Process



**Item 30.48:**

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

Emission Unit: 0-00006  
Process: F20 Source Classification Code: 3-05-999-99

Process Description:

Three granulators are used to break apart clumped ceramic material as part of the sagger (small ceramic containers) loading process. Dust generated from the granulation process and sagger loading is exhausted to a baghouse(emission point 00619).

Emission Source/Control: 61900 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 61901 - Process

Emission Source/Control: 61902 - Process

Emission Source/Control: 61903 - Process

**Item 30.49:**

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

Emission Unit: 0-00006  
Process: F21 Source Classification Code: 3-05-150-04

Process Description:

Discharge of a cone blender after blending. No emissions are generated during blending. Dust generated during filling is exhausted to a baghouse(emission point 00620).

Emission Source/Control: 62000 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 62001 - Process

**Item 30.50:**

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

Emission Unit: 0-00006  
Process: F22 Source Classification Code: 3-05-150-04

Process Description:

Filling of a cone blender prior to blending. No emissions are generated during blending. Dust generated during filling is exhausted to a baghouse (emission point 00621).

Emission Source/Control: 62100 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 62101 - Process



**Item 30.51:**

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

Emission Unit: 0-00006  
Process: F24 Source Classification Code: 3-99-999-98  
Process Description:  
Local ventilation(emission point 00623) associated with  
non-routine maintenance of TiCL4 line pumps and valves.

Emission Source/Control: 62302 - Process

**Item 30.52:**

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

Emission Unit: 0-00006  
Process: F25 Source Classification Code: 3-05-150-05  
Process Description:  
Ventilation for two mix tanks #6 and #7 is exhausted to  
emission point 00623.

Emission Source/Control: 62301 - Process

**Item 30.53:**

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

Emission Unit: 0-00006  
Process: F26 Source Classification Code: 3-05-150-03  
Process Description:  
The discharge from a 24" jet mill to a product hopper.  
Dust generated during the discharge of a processed  
material into the hopper is exhausted to a baghouse and  
then to emission point 00624.

Emission Source/Control: 62400 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 62404 - Process

**Item 30.54:**

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

Emission Unit: 0-00006  
Process: F27 Source Classification Code: 3-05-150-05  
Process Description:  
Cone blending process. Dust is generated during the  
filling and discharge from the blender. No dust is  
generated during the blending process. Generated dust is  
exhausted to a baghouse and then to emission point 00624.

Emission Source/Control: 62400 - Control  
Control Type: FABRIC FILTER





Emission Source/Control: 62402 - Process

Emission Source/Control: 62403 - Process

**Item 30.55:**

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

Emission Unit: 0-00006

Process: F28

Source Classification Code: 3-05-150-03

Process Description:

A pulverizer (hammer mill) and associated material handling equipment located in Building 2. Dust generated is exhausted to a baghouse and emission point 00624.

Emission Source/Control: 62400 - Control

Control Type: FABRIC FILTER

Emission Source/Control: 62401 - Process

**Item 30.56:**

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

Emission Unit: 0-00006

Process: F29

Source Classification Code: 3-99-999-89

Process Description:

Ventilation system associated with the filling of the TiCl<sub>4</sub> storage tank. During filling operations displaced TiCl<sub>4</sub> vapors are exhausted to a water scrubber and to emission point 00625.

Emission Source/Control: 62500 - Control

Control Type: WET SCRUBBER

Emission Source/Control: 62501 - Process

**Item 30.57:**

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

Emission Unit: 0-00006

Process: F30

Source Classification Code: 3-05-150-05

Process Description:

Local exhaust systems which provide ventilation for ten process/mix tanks. The ventilation systems exhausts vapor and dust to a water scrubber emission point 00625.

Emission Source/Control: 62500 - Control

Control Type: WET SCRUBBER

Emission Source/Control: 62502 - Process

Emission Source/Control: 62503 - Process

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Emission Source/Control: 62504 - Process

Emission Source/Control: 62505 - Process

Emission Source/Control: 62506 - Process

Emission Source/Control: 62507 - Process

Emission Source/Control: 62508 - Process

Emission Source/Control: 62509 - Process

Emission Source/Control: 62510 - Process

Emission Source/Control: 62512 - Process

**Item 30.58:**

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

Emission Unit: 0-00006

Process: F31

Source Classification Code: 3-99-999-98

Process Description:

A vacuum filtration system. Vapors generated during the filtration process are exhausted to a water scrubber emission point 00625.

Emission Source/Control: 62500 - Control

Control Type: WET SCRUBBER

Emission Source/Control: 62511 - Process

**Item 30.59:**

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

Emission Unit: 0-00006

Process: F32

Source Classification Code: 3-05-150-02

Process Description:

Two electrically heated Harper kilns used to calcine ceramic materials. Dust and moisture generated during the calcining process are exhausted from each kiln to a baghouse and to emission point 00626.

Emission Source/Control: 62400 - Control

Control Type: FABRIC FILTER

Emission Source/Control: 62408 - Process

Emission Source/Control: 62409 - Process

**Item 30.60:**

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



Emission Unit: 0-00006  
Process: F35 Source Classification Code: 3-99-999-98  
Process Description:  
NaOH vapors are exhausted to atmosphere thru emission point 00627 during filling of the NAOH storage tank.

Emission Source/Control: 62901 - Process

**Item 30.61:**

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

Emission Unit: 0-00006  
Process: F37 Source Classification Code: 3-05-150-02  
Process Description:  
Process associated with the 6x60 and 6x50 calciner feed systems which discharge dust from the calciner feed into a baghouse and to emission point 00631.

Emission Source/Control: 63100 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 63101 - Process

Emission Source/Control: 63102 - Process

**Item 30.62:**

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

Emission Unit: 0-00006  
Process: F38 Source Classification Code: 3-05-150-05  
Process End Date: 1/1/2006  
Process Description:  
Material is dumped into the Shar Mix Tank for blending. Dust generated from the addition of solid material into the tank is exhausted to the baghouse.

Emission Source/Control: 63400 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 63401 - Process

**Item 30.63:**

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

Emission Unit: 0-00006  
Process: F39 Source Classification Code: 3-05-150-03  
Process Description:  
A 24" Jet Mill #6 located in Building 2. Material is fed into the mill and ground to a very fine particle size using high pressure air. Ground material is discharged directly into a product collector (baghouse) which discharges into a hopper. Emissions from the jet mill are



vented through the product collector (baghouse) to emission point 00635.

Emission Source/Control: 63500 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 63501 - Process

**Item 30.64:**

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

Emission Unit: 0-00006  
Process: F40 Source Classification Code: 3-05-150-03

Process Description:  
Discharge from a 24" Jet Mill to a product hopper. Dust generated during the discharge of the processed material into the hopper is exhausted to a baghouse and to emission point 00624.

Emission Source/Control: 62400 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 62407 - Process

**Item 30.65:**

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

Emission Unit: 0-00006  
Process: F41 Source Classification Code: 3-05-150-05

Process Description:  
Material is dumped into a small Hockmeyer mixing tank for blending and subsequent processing in the Netzsch Mills. Dust generated during the loading of the tank is exhausted to a baghouse and then to emission point 00637.

Emission Source/Control: 63700 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: 63701 - Process

**Item 30.66:**

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

Emission Unit: 0-00006  
Process: F42 Source Classification Code: 3-05-150-02

Process Description:  
Dried trays of material from the Quincy dryers are dumped into a hopper for further processing. The dust generated from the tray dumping operation is exhausted to a baghouse and emission point 00637.

Emission Source/Control: 63700 - Control



Control Type: FABRIC FILTER

Emission Source/Control: 63702 - Process

**Item 30.67:**

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

Emission Unit: 0-00006

Process: F43

Source Classification Code: 3-05-150-05

Process Description:

The batch weigh DC process consists of a material blending system and associated material handling equipment. Dust generated from the blending process and material handling equipment is exhausted to two similar baghouses in series and to emission point 00638.

Emission Source/Control: 63800 - Control

Control Type: FABRIC FILTER

Emission Source/Control: 63801 - Control

Control Type: FABRIC FILTER

Emission Source/Control: 63802 - Process

Emission Source/Control: 63803 - Process

Emission Source/Control: 63804 - Process

**Item 30.68:**

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

Emission Unit: 0-00006

Process: F44

Source Classification Code: 3-05-150-05

Process Description:

The Batch Weigh DC process consists of a material blending system and associated material handling equipment. Dust generated from the blending process and material handling equipment is exhausted to two similar baghouses in series.

Emission Source/Control: 63800 - Control

Control Type: FABRIC FILTER

Emission Source/Control: 63801 - Control

Control Type: FABRIC FILTER

Emission Source/Control: 63805 - Process

Emission Source/Control: 63806 - Process

Emission Source/Control: 63807 - Process

**New York State Department of Environmental Conservation**

Permit ID: 9-2930-00032/00263

Facility DEC ID: 9293000032



**Condition 31: Compliance Certification**  
Effective between the dates of 02/09/2010 and 02/08/2015

**Applicable Federal Requirement: 6 NYCRR 212.3 (b)**

**Item 31.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00002

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 31.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Implementation of a routine baghouse control equipment inspection, maintenance, and recordkeeping (I & M) plan as described in Attachment B and incorporated into this permit under the facility-wide condition for 6NYCRR, Part 212 for the collectors which exhaust to emission points 00205, 00206, and 00207. The I&M plan will ensure proper operation of the control equipment and compliance with the 0.15 gr/dscf limit.

An inspection can also be initiated as a result of a visible emissions evaluation.

A daily inspection/maintenance log will be completed by each department and include manometric readings, required repairs and date of repair completion. Records are to be kept on-site for a period of 5 years.

Parameter Monitored: PARTICULATES

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: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.



The initial report is due 7/30/2010.  
Subsequent reports are due every 6 calendar month(s).

**Condition 32: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement: 6 NYCRR 212.4 (c)**

**Item 32.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00002

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

**Item 32.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Implementation of a routine baghouse control equipment inspection, maintenance, and recordkeeping (I&M) plan as described in Attachment B and incorporated into this permit under the facility-wide condition for 6NYCRR, Part 212 for the baghouse collectors which exhaust to emission points 00201, 00202, 00204, 00208, 00209, 00210, 00211, 00212, 00213, 00214, 00215, 00216, and 00217. The I&M plan will ensure proper operation of the control equipment and compliance with the 0.05 gr/dscf limit. Emission point 00201 is also subject to the Compliance Assurance Monitoring(CAM) provisions of 40 CFR Part 64.

An inspection can also be initiated as a result of a visible emissions evaluation.

A daily inspection/maintenance log will be completed by each department and include magnehelic readings, required repairs and date of repair completion. Records are to be kept on-site for a period of 5 years.

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: SEMI-ANNUALLY (CALENDAR)



Reports due 30 days after the reporting period.  
The initial report is due 7/30/2010.  
Subsequent reports are due every 6 calendar month(s).

**Condition 33: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**  
**Applicable Federal Requirement:6 NYCRR 212.10 (c) (3)**

**Item 33.1:**  
The Compliance Certification activity will be performed for:

Emission Unit: 0-00002

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

**Item 33.2:**  
Compliance Certification shall include the following monitoring:

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

Monitoring Description:

The three single-phase electric arc furnaces described in process B01 and the single R & D three-phase furnace described in process B05, each having actual average emissions of nitrogen oxides(NOx) of 15.9#/hour and a combined total of 210 tons per year, are subject to the Reasonably Available Control Requirements(RACT) set forth in 6NYCRR, Part 212.10 for major sources of NOx. A RACT analysis was submitted with the initial Title V application which evaluated the technical and economic feasibility of available control technologies for electric arc furnaces. This analysis demonstrated that no feasible control technology is available and a variance from the RACT control strategy requirement was requested. This Department and the USEPA in their 11/25/98 correspondence from R. Ruvo(USEPA) to J. DiPronio(NYSDEC) concurred with this determination. Therefore, the RACT demonstration was submitted to the USEPA for approval as a revision to the New York State Implementation Plan(SIP).

RACT was re-evaluated as part of this renewal application and once again demonstrated that NOx control technology is not technically and economically feasible.

The special conditions to establish RACT are incorporated into this Title V permit as follows:

1. Nitrogen oxide emissions from each furnace are limited to 15.9#/hour and 210 tons per year. These emissions correspond to an average raw material charging rate of





1550#/hour per furnace as determined during stack tests conducted on February 5th and 6th and March 5th, 1998. The appropriate production recordkeeping will be maintained to demonstrate compliance with these limits and made available to Department representatives upon request.

2. The facility must continue to evaluate control technologies and other compliance strategies to reduce NO<sub>x</sub> emissions as they become available. When demonstrated as technically and economically feasible, TAM shall implement these control strategies as RACT.

3. The RACT variance is valid for a period of five years, the term of the Title V period. A full RACT analysis is to be completed and submitted with each permit renewal.

4. This Department reserves the right to require the source owner to evaluate and implement innovative control technology within a time frame established by the Division of Air Resources.

Parameter Monitored: RAW MATERIAL

Upper Permit Limit: 1550 pounds per hour

Monitoring Frequency: PER BATCH OF PRODUCT/RAW MATERIAL CHANGE

Averaging Method: 1 HOUR MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 34: Compliance Certification**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:40 CFR Part 64**

**Item 34.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00002

Emission Point: 00201

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 34.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Three high temperature carbon arc furnaces used for the



melting of zirconium and designated as furnaces #9, #10 & #11, and described in emission unit 00002 are exhausted thru emission point 00201. Potential emissions of particulates are greater than 100 tons per year and therefore these sources are subject to the Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64. The facility has submitted a plan for monitoring consistent with the requirements of the rule as follows:

Indicator:

1. Visible emissions: from the baghouse exhaust are monitored daily during a facility survey.
2. Pressure Drop: across the baghouse is measured with a magnehelic differential pressure gauge.
3. Weekly (or between production runs or result of VE evaluation) inspection according to I/M checklist; maintenance performed as needed.

Range:

1. An average opacity of less than 20% (6-min average). Excursions trigger an inspection and corrective action per the maintenance procedures.
2. An excursion is defined as a pressure drop less than 1 inches water column or greater than 15 inches water column. Excursions trigger inspection and maintenance plan.

Performance Criteria:

1. Opacity is observed at the emission point during source operation. Any visible emissions require corrective action as per the I/M program.
2. Pressure drop across the baghouse is measured at the inlet and outlet. The gauge has a minimum accuracy of 2% over the instrument range.
3. Inspections are performed at the baghouses.

QA/QC:

1. Observer will be familiar with the percent opacity designation and will complete the daily log.
2. The pressure gauge is calibrated via a zero check when the baghouse is not in use. Pressure taps are checked for plugging daily.
3. Qualified personnel perform the inspection.

Monitoring Frequency:

1. Observation is performed daily during facility survey and documented by the observer. Agency reserves the right to request or conduct Method 9 evaluation.
2. Pressure drop is monitored continuously and recorded



daily.

3. Weekly inspection and records are maintained to document the inspection and any required maintenance.

A monitoring report must be submitted semi-annually with the required compliance certifications and which summarizes the number, duration, and cause of exceedances and corrective actions taken. This report shall also include the number, duration, and cause of the magnetic downtime other than routine downtime for calibration checks. These records are to be maintained for a period of five years.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 35: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement: 6 NYCRR 212.3 (b)**

**Item 35.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00002

Emission Point: 00203

Process: B03

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 35.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Implementation of a cyclone control equipment inspection, maintenance, and recordkeeping plan for the 6 X 60 rotary gas-fired calciner located in Building 143, and identified as Process B03, emission point 203. The cyclone is used as a primary means of emission control for all products. As described in the I & M plan (Attachment D), in order to ensure continuous compliance with the particulate emission limit of 0.05 grains/dscf when used as stand alone control:

-material in the cyclone will be removed and the cyclone



inspected on a minimum 6 month basis, and

-process thruput will be measured for each batch. The material thruput per batch will be calculated by dividing the total process thruput by the total number of hours required to pass all material thru the calciner. The average hourly thruput is 6240 tons per hour. TAM has been determined that this thruput will not result in emissions which will exceed the grain concentration.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 0.15 grains per dscf

Reference Test Method: Method 5

Monitoring Frequency: PER BATCH OF PRODUCT/RAW MATERIAL CHANGE

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

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 36: Compliance Certification**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 212.3 (b)**

**Item 36.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00003

Emission Point: 00301

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 36.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Implementation of a routine baghouse control equipment inspection, maintenance, and recordkeeping plan as detailed in Attachment B and incorporated into this permit as a facility-wide condition for 6NYCRR, Part 212, in order to ensure compliance with the particulate emission limit of 0.15 grains/dscf. An inspection can also be initiated as a result of a visible emissions evaluation.

A daily inspection and maintenance log will be completed by each department and include magnehelic readings,



required repairs and date of repair completion. Records are to be kept on-site for a period of 5 years.

Parameter Monitored: PARTICULATES  
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: SEMI-ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 7/30/2010.  
Subsequent reports are due every 6 calendar month(s).

**Condition 37: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement: 6 NYCRR 212.4 (c)**

**Item 37.1:**  
The Compliance Certification activity will be performed for:

Emission Unit: 0-00004

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

**Item 37.2:**  
Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Implementation of a routine baghouse control equipment inspection, maintenance, and recordkeeping (I & M) plan as detailed in Attachment B and summarized in this permit as a facility-wide condition for 6NYCRR, Part 212 in order to ensure compliance with the particulate emission limit of 0.05 grains/dscf as applicable to emission points 401 and 402. For emission point 401 when processing zircon, the cyclone collector alone will serve as the primary means of control. An inspection can also be initiated as a result of a visible emissions evaluation.

A daily inspection and maintenance log will be completed

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by each department and include magnehelic readings, required repairs and date of repair completion. Records are to be kept on-site for a period of 5 years.

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: SEMI-ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 7/30/2010.
Subsequent reports are due every 6 calendar month(s).

Condition 38: Compliance Certification
Effective between the dates of 02/09/2010 and 02/08/2015

Applicable Federal Requirement:6 NYCRR 212.4 (c)

Item 38.1:
The Compliance Certification activity will be performed for:

Emission Unit: 0-00004 Emission Point: 00401
Regulated Contaminant(s):
CAS No: 0NY075-00-0 PARTICULATES

Item 38.2:
Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:
Implementation of a cyclone control equipment inspection, maintenance, and recordkeeping plan for the PT rotary gas-fired calciner located in Building 17, emission point 401. The cyclone is used as a primary means of emission control for zircon only. Otherwise, material is processed first thru the cyclone prior to the baghouse. As described in the plan (Attachment D), in order to ensure continuous compliance with the particulate emission limit of 0.05 grains/dscf when used as stand alone control:

- material in the cyclone will be removed and the cyclone inspected on a minimum 6 month basis, and
-process thruput will be measured for each batch of



zircon. The material thruput per batch will be calculated by dividing the total process thruput by the total number of hours required to pass all material thru the calciner. The average hourly thruput is 1300 tons per hour (4680 tons per year). It has been determined that this thruput will not result in emissions which will exceed the grain concentration.

Work Practice Type: PROCESS MATERIAL THRUPUT

Process Material: RAW MATERIAL

Upper Permit Limit: 1300 tons per hour

Monitoring Frequency: PER BATCH OF PRODUCT/RAW MATERIAL CHANGE

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

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 39: Compliance Certification**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 212.3 (b)**

**Item 39.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00005

Emission Point: 00501

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 39.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

A maintenance program for the settling chamber associated with the 7 x 70 calciner and as described in Attachment C and summarized below will be implemented in order to ensure continuous compliance with the particulate emission limit of 0.15 gr/dscf;

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-whereby the collected material will be removed and the control device inspected on a minimum six month basis, and

-implementation of work practice to ensure raw material thru the calciner will not exceed the rate which would result in emissions in excess of the grain standard. The process thruput will be measured for each batch and an hourly thruput calculated.

Work Practice Type: PROCESS MATERIAL THRUPUT

Process Material: RAW MATERIAL

Upper Permit Limit: 1 tons per hour

Monitoring Frequency: SEMI-ANNUALLY

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 7/30/2010.

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

**Condition 40: Compliance Certification**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 212.3 (b)**

**Item 40.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00005

Emission Point: 00502

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 40.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Implementation of a routine baghouse control equipment inspection, maintenance, and recordkeeping (I & M) plan as described in Attachment B and incorporated into this permit under the facility-wide condition for 6NYCRR, Part 212 for the baghouse collector associated with the 8 x 8 dry mill. The I&M plan will ensure proper operation of the control equipment directed to emission point 00502 and compliance with the 0.15 gr/dscf limit.

An inspection can also be initiated as a result of a visible emissions evaluation.



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A daily inspection/maintenance log will be completed by each department and include magnehelic readings, required repairs and date of repair completion. Records are to be kept on-site for a period of 5 years.

Parameter Monitored: PARTICULATES

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: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 41: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement: 6 NYCRR 212.4 (c)**

**Item 41.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00005

Emission Point: 00503

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 41.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Implementation of a routine baghouse control equipment inspection, maintenance, and recordkeeping (I & M) plan for 7 x 10 dry mill as described in this permit under the monitoring condition for the Compliance Assurance Monitoring (CAM) provisions of 40 CFR Part 64. The CAM plan will also ensure continuous compliance with the 0.05 gr/dscf particulate limit of 6 NYCRR, Part 212.4(c) for the dry mill which exhausts through emission point 000503.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 0.05 grains per dscf

Reference Test Method: Method 5

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

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

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 42: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:40 CFR Part 64**

**Item 42.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00005

Emission Point: 00503

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 42.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The 7 x 10 mill, located in emission unit 00005 and having potential emissions of particulates greater than 100 tons per year, is therefore subject to the Compliance Assurance Monitoring (CAM)Rule. Emissions are controlled by a baghouse collector and exhaust to the atmosphere thru emission point 00503.

A plan has been submitted and accepted for monitoring consistent with the requirements of the rule as follows:

Indicator:

1. Visible emissions (VE): from the baghouse exhaust are monitored daily during a facility survey.
2. Pressure Drop: across the baghouse is measured with a magnehelic differential pressure gauge.
3. Weekly (or between production runs or result of a VE evaluation) inspection according to Inspection & Maintenance (I/M) checklist; maintenance performed as needed.

Range:

1. An average opacity of less than 20% (6-min average). Excursions trigger an inspection and corrective action per the maintenance procedures.
2. An excursion is defined as a pressure drop less than 1 inches water column or greater than 15 inches water



column. Excursions trigger inspection and maintenance plan.

Performance Criteria:

1. Opacity is observed at the emission point during source operation. Any visible emissions require corrective action as per the I/M program.
2. Pressure drop across the baghouse is measured at the inlet and outlet. The gauge has a minimum accuracy of 2% over the instrument range.
3. Inspections are performed at the baghouses.

QA/QC:

1. Observer will be familiar with the percent opacity designation and will complete the daily log.
2. The pressure gauge is calibrated via a zero check when the baghouse is not in use. Pressure taps are checked for plugging daily.
3. Qualified personnel perform the inspection.

Monitoring Frequency:

1. Observation is performed daily during facility survey and documented by the observer. Agency reserves the right to request or conduct Method 9 evaluation.
2. Pressure drop is monitored continuously and recorded daily.
3. Weekly inspection and records are maintained to document the inspection and any required maintenance.

A monitoring report must be submitted semi-annually with the required compliance certifications and which summarizes the number, duration, and cause of exceedances and corrective actions taken. This report shall also include the number, duration, and cause of the magnetohelic downtime other than routine downtime for calibration checks. These records are to be maintained for a period of five years.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 43: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement: 6 NYCRR 212.3 (b)**

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**Item 43.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00006

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 43.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Implementation of a routine baghouse control equipment inspection, maintenance, and recordkeeping plan as detailed in Attachment B and incorporated into this permit under the facility-wide condition for 6NYCRR, Part 212 in order to ensure compliance with the particulate emission limit of 0.15 grains/dscf as applicable to emission points 00613 and 00614.

An inspection can also be initiated as a result of a visible emissions evaluation.

A daily inspection/maintenance log will be completed by each department and include magnehelic readings, required repairs and date of repair completion. Records are to be kept on-site for a period of 5 years.

Parameter Monitored: PARTICULATES

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: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 44: Compliance Certification**

**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement: 6 NYCRR 212.3 (b)**

**Item 44.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00006

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

**Item 44.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

A maintenance program for the settling chamber associated with the 6 x 60 calciner and the 6 x 50 calciner (emission points 00601 and 00602) as described in Attachment C and summarized below will be implemented in order to ensure continuous compliance with the particulate emission limit of 0.15 gr/dscf;

-whereby the collected material will be removed and the control device inspected on a minimum six month basis, and

-implementation of work practice to ensure raw material thru the calciner will not exceed the rate which would result in emissions in excess of the grain standard. The process thruput will be measured for each batch and an hourly thruput calculated.

Parameter Monitored: PARTICULATES

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: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 45: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 212.4 (c)**

**Item 45.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00006

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



**Item 45.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Implementation of a routine baghouse control equipment inspection, maintenance, and recordkeeping (I & M) plan. The plan is described in Attachment B and incorporated into this permit as a facility-wide condition for 6NYCRR, Part 212 in order to ensure compliance with the particulate emission limit of 0.05 grains/dscf as applicable to emission points 603, 604, 606, 607, 608, 609, 610, 611, 612, 619, 620, 621, 624, 630, 631, 618, 632, 633, 634, 635, 637, and 638.

An inspection can also occur as a result of a visible emissions evaluation.

A daily inspection/maintenance log will be completed by each production department and include magnehelic readings, required repairs, and the date of repair completion.

Records are to be kept on-site for a period of 5 years and made available to the Department on request.

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: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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

**Condition 46: Compliance Certification**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable Federal Requirement:6 NYCRR 212.4 (c)**

**Item 46.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 0-00006

Emission Point: 00625

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 46.2:**



Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Particulate emissions are generated from titanium tetrachloride decomposition and the addition of raw materials associated with the High Purity Barium Titanate (HPB) process in building 147. Particulate emissions are limited to 0.05 grains/dscf and controlled by a hygiene scrubber exhausted to emission point 00625.

The packed bed Ceilcote scrubber is operated on a continuous basis (24 hours/day, 350 days/year) is only down for maintenance or if no processes are operating. A preventative maintenance program is implemented to maintain system efficiency.

The scrubber maintenance program as described in Attachment E consists of twice per year cleaning of the system packing and associated air and water nozzles. In addition to cleaning of the primary system components, each time scrubber maintenance is performed, an internal inspection of the scrubber housing will be performed to identify signs of wear or corrosion. In addition, ductwork leading to the scrubber will also be inspected for signs of wear and corrosion, plugging, or evidence of leaks. Repairs, cleaning, or replacement of ductwork will be performed at this time. The spray pattern of the nozzles will also be checked to ensure the pattern meets the mfg's specs.

A copy of the inspection/maintenance log is included in Attachment E. If maintenance is required, a brief summary of maintenance procedures will be included.

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

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

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Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2010.

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





**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: 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 applicable requirements and are not subject to compliance certification requirements unless otherwise noted or required under 6 NYCRR Part 201.**

**Condition 47: Contaminant List**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable State Requirement:ECL 19-0301**

**Item 47.1:**  
Emissions of the following contaminants are subject to contaminant specific requirements in this permit(emission limits, control requirements or compliance monitoring conditions).

CAS No: 007647-01-0  
Name: HYDROGEN CHLORIDE



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

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

**Condition 48: Unavoidable noncompliance and violations**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable State Requirement:6 NYCRR 201-1.4**

**Item 48.1:**

At the discretion of the commissioner a violation of any applicable emission standard for necessary scheduled equipment maintenance, start-up/shutdown conditions and malfunctions or upsets may be excused if such violations are unavoidable. The following actions and recordkeeping and reporting requirements must be adhered to in such circumstances.

(a) The facility owner and/or operator shall compile and maintain records of all equipment 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 commissioner's representative when requested to do so in writing or when so required by a condition of a permit issued for the corresponding air contamination source except where conditions elsewhere in this permit which contain more stringent reporting and notification provisions for an applicable requirement, in which case they supercede those stated here. Such reports shall describe why the violation was unavoidable and shall include the time, frequency and duration of the maintenance and/or start-up/shutdown activities and the identification of air contaminants, and the estimated emission rates. If a facility owner and/or operator is subject to continuous stack monitoring and quarterly reporting requirements, he need not submit reports for equipment maintenance or start-up/shutdown for the facility to the commissioner's representative.

(b) In the event that emissions of air contaminants in excess of any emission standard in 6 NYCRR Chapter III Subchapter A occur due to a malfunction, the facility owner and/or operator shall report such malfunction by telephone to the commissioner's representative as soon as possible during normal working hours, but in any event not later than two working days after becoming aware that the malfunction occurred. Within 30 days thereafter, when requested in writing by the commissioner's representative, the facility owner and/or operator shall submit a written report to the commissioner's representative describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates. These reporting requirements are superceded by conditions elsewhere in this permit which contain reporting and notification provisions for applicable requirements more stringent than those above.

(c) The Department may also require the owner and/or operator to include in reports described under (a) and (b) above an estimate of the maximum ground level concentration of 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 49: Air pollution prohibited**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable State Requirement:6 NYCRR 211.2**

**Item 49.1:**

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 50: Compliance Demonstration**  
**Effective between the dates of 02/09/2010 and 02/08/2015**

**Applicable State Requirement:6 NYCRR 212.4 (a)**

**Item 50.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 0-00006                      Emission Point: 00625  
Regulated Contaminant(s):  
CAS No: 007647-01-0                      HYDROGEN CHLORIDE

**Item 50.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Titanium tetrachloride(TiCL4) used as a raw material, reacts with moisture to form hydrochloric acid (HCL) and titanium dioxide. Several associated processes located in building 147, process and mix tanks, TiCL4 tank filling, and a vacuum belt filter, are exhausted to a water scrubber which removes the hydrochloric acid vapors and particulates.



HCL, assigned an environmental rating of 'B', and having an emission rate potential(ERP) of 114 lb/hr from all process sources directed to the scrubber will require a minimum control efficiency of 94% as per 6NYCRR, Part 212.9 (b)Table 2. (Part 212.5(a) requires the ERP to be determined by the sum of all process sources directed through a single emission point.)

The packed bed Ceilcote scrubber is operated on a continuous basis (24 hours/day, 350 days/year) is only down for maintenance or if no processes are operating. A preventative maintenance program is implemented to maintain system efficiency.

The scrubber maintenance program as described in Attachment E consists of twice per year cleaning of the system packing and associated air and water nozzles. In addition to cleaning of the primary system components, each time scrubber maintenance is performed, an internal inspection of the scrubber housing will be performed to identify signs of wear or corrosion. In addition, ductwork leading to the scrubber will also be inspected for signs of wear and corrosion, plugging, or evidence of leaks. Repairs, cleaning, or replacement of ductwork will be performed at this time. The spray pattern of the nozzles will also be checked to ensure the pattern meets the mfg's specs.

A copy of the inspection/maintenance log is included in Attachment E. If maintenance is required, a brief summary of maintenance procedures will be included.

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

Parameter Monitored: DESTRUCTION EFFICIENCY  
Lower Permit Limit: 94 percent degree of air cleaning or greater  
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION  
Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE - SEE MONITORING DESCRIPTION  
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 7/30/2010.  
Subsequent reports are due every 6 calendar month(s).

