



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

**IDENTIFICATION INFORMATION**

Permit Type: Air Title V Facility  
Permit ID: 9-2911-00078/00009  
Effective Date: 04/21/2016 Expiration Date: 04/20/2021

Permit Issued To: GLOBE METALLURGICAL INC  
PO BOX 157  
BEVERLY, OH 45715-0157

Contact: MATT GREENE  
GLOBE METALLURGICAL INC  
PO BOX 157  
BEVERLY, OH 45715  
(740) 984-8608

Facility: GLOBE METALLURGICAL INC  
3807 HIGHLAND AVE  
NIAGARA FALLS, NY 14305

Contact: MATT GREENE  
GLOBE METALLURGICAL INC  
PO BOX 157  
BEVERLY, OH 45715  
(740) 984-8608

Description:

Globe Metallurgical produces high purity silicon metal in two open 22 megawatt electric arc furnaces. The facility is a major source of emissions of sulfur dioxide, carbon monoxide, hydrogen chloride and nitrogen oxides and therefore subject to the Title V permitting requirements of 40 CFR 70 and 6 NYCRR, Part 201-6. The facility suspended operations in September 2003 and re-started October 1, 2009.

The submerged electric arc process is a reduction smelting operation accomplished by conversion of electrical energy to heat. Reactants consisting of coal, charcoal, petroleum coke, or other forms of coke, wood chips, and quartz are mixed and added at the top of each furnace. Carbon needed as a reducing agent is supplied by the electrodes, petroleum coke, charcoal, coal, and wood chips. At high temperatures in the reaction zone, the carbon sources react with silicon dioxide and oxygen to form carbon monoxide and reduce the ore to the base metal silicon. Molten product is tapped from the furnace through a tap hole located at the bottom of each furnace. Molten metal and slag flow from the tap hole into a ladle. Hoods capture gaseous and particulate emissions from the



furnaces and tapping operations which are then directed to dedicated positive pressure baghouses, identified as emission points EP002 and EP003. The molten metal is poured into chill pans. Cooled metal is broken, then crushed and sized.

These furnaces operate continuously 24 hours per day with the exception of shutdown periods for maintenance and repair. The #9 furnace produces 42 ton per day of silicon; the #11 produces 39 ton/day.

The two silicon furnaces are subject to the process weight emission limits for ferroalloy furnaces as determined by Table 5 of 6NYCRR, Part 212-2.5. Permissible particulate emissions are calculated using the formula shown in Table 6 of 212-2.5 and based on the process weight input of 25,098 pounds of raw materials per furnace are 21.3 pounds per hour per emission point. A baghouse operation and maintenance program is incorporated into this permit.

Each furnace having hourly nitrogen oxide emissions of 87.6 pounds is also subject to the NO<sub>x</sub> Reasonably Available Control Technology (RACT) compliance requirements of 6NYCRR, Part 212-3. A NO<sub>x</sub> RACT analysis was submitted with the initial Title V permit and revised for this renewal. It was again determined that there are no feasible control technologies available and therefore, RACT as no control is incorporated into this permit limiting NO<sub>x</sub> emissions to 87.6 pounds per hour per furnace and a combined 767.3 tons per year of NO<sub>x</sub>. In addition, the facility is required to perform regular refractory maintenance on these furnaces and continue to investigate emissions reductions technologies. The RACT compliance plan was initially submitted to the USEPA as a source specific State Implementation Plan (SIP) revision.

It has been determined by this Department's legal staff and Albany that the coal and petroleum coke or other forms of coke, used in the furnace charge are a fuel source subject to the sulfur in fuel limitations of 6NYCRR, Part 225-1.2(c). The maximum allowable sulfur content is 1.7 lb/ million Btu gross heat content. The average allowable is 1.4 lb/million Btu during any consecutive three month period. The sulfur content of coke used can range from 2 % to 5.5% by weight which would exceed the sulfur limitation. However, since coke provides more fixed carbon, one pound of coke is equivalent to 1.5 pounds of coal and generates less NO<sub>x</sub> per pound of material produced. Therefore, pursuant to 225-1.4, a general variance allows the usage of coke exceeding the sulfur limitation in combination with coal in the furnace charge provided that the emissions from the combined usage do not exceed sulfur dioxide emissions, on the basis of pounds of sulfur per million Btu heat input, at a rate greater than



that from fuels meeting mandated sulfur limits. Coal and coke will be combined in a ratio of a minimum 4:1 to ensure compliance. At this time, the permittee does not use coke and the coal is compliant with 225-1.

A tap hood surrounds the tap hole on three sides and pulls fume to the top of the furnace. Fumes from tapping are pulled into the dust collectors. There is a variable speed fan which is required to operate at 50 hertz.

Emissions from tapping blow: Because of the various chemical reactions occurring as the charge materials are melting, there is always a high gas pressure situation in the furnace. These high pressure gases exist in the reaction zone and continuously exit through the charge material. The high pressure sometimes can increase to the point where high velocity gases blow out the tap holes- this is a blowing tap. The response is to reduce the furnace charge.

The opacity from each emission source is not to exceed 20% during any consecutive 6 minute period as specified in Part 212-1.6.

Particulate emissions from the baghouses associated with crushing and grinding and material handling, emission points EP06A and EP007 as regulated by 6NYCRR, Part 212-2.4(b)(1) and are not to exceed 0.05 gr/dscf.

A Morbark wood chipper is powered by a 1050 horsepower diesel engine and subject to the CI ICE requirements of 40 CFR Part 60, Subpart IIII-New Source Performance Standards(NSPS). Because the facility is a major source of hydrogen chloride, a hazardous air pollutant, the engine is also subject to the CI ICE requirements under 40 CFR Part 63 Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants. The diesel engine is a non-emergency 2008 model year with an engine displacement less than 30 liters per cylinder. The NSPS regulations specify certification emissions standards for all pollutants: carbon monoxide, particulates, hydrocarbons and nitrogen oxides. Sulfur dioxide is reduced through the use of low sulfur fuel.

A fugitive dust plan is incorporated into this permit to minimize fugitives from roadways, raw material storage piles, and raw material handling.



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:       LISA M CZECHOWICZ  
                                      NYSDEC - REGION 9  
                                      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 renewal application at least 180 days before expiration of permits for both Title V and State Facility Permits.

**Item 3.3:**

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

**Condition 4: Permit modifications, suspensions or revocations by the Department**

**Applicable State Requirement: 6 NYCRR 621.13**

**Item 4.1:**



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

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

**\*\*\*\* Facility Level \*\*\*\***

**Condition 5: Submission of application for permit modification or renewal-REGION 9 HEADQUARTERS**

**Applicable State Requirement: 6 NYCRR 621.6 (a)**

**Item 5.1:**

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



**New York State Department of Environmental Conservation**

Permit ID: 9-2911-00078/00009

Facility DEC ID: 9291100078



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

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

**IDENTIFICATION INFORMATION**

Permit Issued To: GLOBE METALLURGICAL INC  
PO BOX 157  
BEVERLY, OH 45715-0157

Facility: GLOBE METALLURGICAL INC  
3807 HIGHLAND AVE  
NIAGARA FALLS, NY 14305

Authorized Activity By Standard Industrial Classification Code:  
3313 - ELECTROMETALLURGICAL PRODUCTS  
3339 - PRIMARY NONFERROUS METALS, NEC

Permit Effective Date: 04/21/2016

Permit Expiration Date: 04/20/2021



## LIST OF CONDITIONS

### FEDERALLY ENFORCEABLE CONDITIONS

#### Facility Level

- 1 6 NYCRR 200.6: Acceptable Ambient Air Quality
- 2 6 NYCRR 201-6.4 (a) (7): Fees
- 3 6 NYCRR 201-6.4 (c): Recordkeeping and Reporting of Compliance Monitoring
- 4 6 NYCRR 201-6.4 (c) (2): Records of Monitoring, Sampling, and Measurement
- 5 6 NYCRR 201-6.4 (c) (3) (ii): Compliance Certification
- 6 6 NYCRR 201-6.4 (e): Compliance Certification
- 7 6 NYCRR 202-2.1: Compliance Certification
- 8 6 NYCRR 202-2.5: Recordkeeping requirements
- 9 6 NYCRR 215.2: Open Fires - Prohibitions
- 10 6 NYCRR 200.7: Maintenance of Equipment
- 11 6 NYCRR 201-1.7: Recycling and Salvage
- 12 6 NYCRR 201-1.8: Prohibition of Reintroduction of Collected Contaminants to the air
- 13 6 NYCRR 201-3.2 (a): Exempt Sources - Proof of Eligibility
- 14 6 NYCRR 201-3.3 (a): Trivial Sources - Proof of Eligibility
- 15 6 NYCRR 201-6.4 (a) (4): Requirement to Provide Information
- 16 6 NYCRR 201-6.4 (a) (8): Right to Inspect
- 17 6 NYCRR 201-6.4 (f) (6): Off Permit Changes
- 18 6 NYCRR 202-1.1: Required Emissions Tests
- 19 40 CFR Part 68: Accidental release provisions.
- 20 40CFR 82, Subpart F: Recycling and Emissions Reduction
- 21 6 NYCRR Subpart 201-6: Emission Unit Definition
- 22 6 NYCRR 201-6.4 (d) (4): Progress Reports Due Semiannually
- 23 6 NYCRR 211.1: Air pollution prohibited
- 24 6 NYCRR 212-1.5 (g): Maintain all process emission sources, including the associated air pollution control and monitoring equipment
- 25 6 NYCRR 212-1.6 (a): Compliance Certification
- 26 6 NYCRR 225-1.4 (a): Compliance Certification

#### Emission Unit Level

- 27 6 NYCRR Subpart 201-6: Emission Point Definition By Emission Unit
- 28 6 NYCRR Subpart 201-6: Process Definition By Emission Unit

#### EU=1-RFMON,Proc=VNT

- 29 6 NYCRR 212-2.3 (a): Compliance Certification

#### EU=1-WDCHP

- 30 6 NYCRR Part 211: Compliance Certification
- 31 40CFR 60.4204(b), NSPS Subpart III: Compliance Certification
- 32 40CFR 60.4207(b), NSPS Subpart III: Compliance Certification
- 33 40CFR 60.4207(b), NSPS Subpart III: Compliance Certification
- 34 40CFR 60.4207(b), NSPS Subpart III: Compliance Certification
- 35 40CFR 60.4211(a), NSPS Subpart III: Compliance Certification
- 36 40CFR 63.6590(a)(1), Subpart ZZZZ: Existing RICE greater than 500 hp at a HAP major facility



- 37 40CFR 63.6600(b), Subpart ZZZZ: Compliance Certification
- 38 40CFR 63.6600(b), Subpart ZZZZ: Compliance Certification
- 39 40CFR 63.6600(d), Subpart ZZZZ: Compliance Certification

**EU=E-AFURN**

- 40 6 NYCRR 212-2.5 (b): Compliance Certification
- 41 6 NYCRR 212-2.5 (b): Compliance Certification
- 42 40 CFR Part 64: Compliance Certification

**EU=E-AFURN,Proc=P01**

- 43 6 NYCRR Part 211: Compliance Certification

**EU=E-AFURN,Proc=P02**

- 44 6 NYCRR 212-3.1 (c) (3): Compliance Certification

**EU=E-AFURN,Proc=TAP**

- 45 6 NYCRR 212-1.5 (g): Compliance Certification
- 46 6 NYCRR 212-1.5 (g): Compliance Certification

**EU=P-ROFIN**

- 47 6 NYCRR 212-2.4 (b): Compliance Certification
- 48 6 NYCRR 212-2.4 (b): Compliance Certification

**EU=R-DWYPK**

- 49 6 NYCRR Part 211: Compliance Certification

**STATE ONLY ENFORCEABLE CONDITIONS**

**Facility Level**

- 50 ECL 19-0301: Contaminant List
- 51 6 NYCRR 201-1.4: Malfunctions and start-up/shutdown activities
- 52 6 NYCRR 211.2: Visible Emissions Limited

**Emission Unit Level**

**EU=1-RFMON,Proc=VNT**

- 53 6 NYCRR 212-2.3 (b): Compliance Demonstration

**EU=E-AFURN**

- 54 6 NYCRR 211.2: 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, as defined by subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the Department 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 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 and maintained;

(3) During the period of the emergency the facility owner 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 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 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 201-6.2 (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 201-6.2 (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 201-6.4 (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 201-6.4 (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 201-6.4 (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 201-6.4 (a) (6)**

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



**Item I: Severability - 6 NYCRR 201-6.4 (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 201-6.4 (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 201-6.4 (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 1: Acceptable Ambient Air Quality**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 200.6**

**Item 1.1:**

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 2: Fees**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 201-6.4 (a) (7)**

**Item 2.1:**

The owner and/or operator of a stationary source shall pay fees to the Department consistent with the fee schedule authorized by ECL 72-0303.

**Condition 3: Recordkeeping and Reporting of Compliance Monitoring**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 201-6.4 (c)**





**Item 3.1:**

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 201-6.2 of Part 201.

**Condition 4: Records of Monitoring, Sampling, and Measurement  
Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 6 NYCRR 201-6.4 (c) (2)**

**Item 4.1:**

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 5: Compliance Certification  
Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 6 NYCRR 201-6.4 (c) (3) (ii)**

**Item 5.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 5.2:**

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 201-6.2(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 may be submitted electronically or physically. Electronic reports shall be submitted using the Department's Air Compliance and Emissions Electronic-Reporting system (ACE). If the facility owner or operator elects to send physical copies instead, two copies shall be sent 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) and one copy shall be sent to the Administrator (or his or her representative). Mailing addresses for the above referenced persons are contained in the monitoring condition for 6 NYCRR Part 201-6.4(e), contained elsewhere in this permit.



Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2016.

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

**Condition 6: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 201-6.4 (e)**

**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:

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.

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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.

iv. All annual compliance certifications may be submitted electronically or physically. Electronic reports shall be submitted using the Department's Air Compliance and Emissions Electronic-Reporting system (ACE). If the facility owner or operator elects to send physical copies instead, two copies shall be sent 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) and one copy shall be sent to the Administrator (or his or her representative). The mailing addresses for the above referenced persons are:

Chief – Stationary Source Compliance Section  
USEPA Region 2  
Air Compliance Branch  
290 Broadway  
New York, NY 10007-1866

The address for the RAPCE is as follows:

Regional Air Pollution Control Engineer  
NYSDEC Region 9 Headquarters  
270 Michigan Avenue  
Buffalo, NY 14203-2915

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 1/30/2017.  
Subsequent reports are due on the same day each year

**Condition 7: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

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

**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:

Emission statements shall be submitted on or before April 15th each year for emissions of the previous calendar year. Statements are to be mailed to: New York State Department of Environmental Conservation, Division of Air Resources, Bureau of Air Quality Planning, 625 Broadway, Albany NY 12233-3251

Monitoring Frequency: ANNUALLY

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due by April 15th for previous calendar year

**Condition 8: Recordkeeping requirements**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

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

**Item 8.1:**

(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 9: Open Fires - Prohibitions**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 215.2**

**Item 9.1:**

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 9.2**

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.





procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

**Condition 11: Recycling and Salvage**  
Effective between the dates of 04/21/2016 and 04/20/2021

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

**Item 11.1:**

Where practical, the owner or operator of an air contamination source shall recycle or salvage air contaminants collected in an air cleaning device according to the requirements of the ECL.

**Condition 12: Prohibition of Reintroduction of Collected Contaminants to the air**  
Effective between the dates of 04/21/2016 and 04/20/2021

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

**Item 12.1:**

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 13: Exempt Sources - Proof of Eligibility**  
Effective between the dates of 04/21/2016 and 04/20/2021

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

**Item 13.1:**

The owner or operator of an emission source or activity that is listed as being exempt may be required to certify that it is operated within the specific criteria described in this Subpart. The owner or operator of any such emission source or activity must maintain all records necessary for demonstrating compliance with this Subpart on-site for a period of five years, and make them available to representatives of the department upon request.

**Condition 14: Trivial Sources - Proof of Eligibility**  
Effective between the dates of 04/21/2016 and 04/20/2021

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

**Item 14.1:**

The owner or operator of an emission source or activity that is listed as being trivial in this Section may be required to certify that it is operated within the specific criteria described in this Subpart. The owner or operator of any such emission source or activity must maintain all required records on-site for a period of five years and make them available to representatives of the department upon request.

**Condition 15: Requirement to Provide Information**  
Effective between the dates of 04/21/2016 and 04/20/2021

**Applicable Federal Requirement:6 NYCRR 201-6.4 (a) (4)**





**Item 15.1:**

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 16: Right to Inspect**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 201-6.4 (a) (8)**

**Item 16.1:**

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 17: Off Permit Changes**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 201-6.4 (f) (6)**

**Item 17.1:**

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.





**Item 20.1:**

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

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

**Condition 21: Emission Unit Definition**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

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

**Item 21.1:**

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

Emission Unit: 1-RFMON

Emission Unit Description:

This emission unit represents the proposed installation of a gravity roof ventilator system on the north side of the furnace building roof.

Building(s): 00FURNBLDG

**Item 21.2:**

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

Emission Unit: 1-WDCHP

Emission Unit Description:

Morbark model 30 Wood chip arrestor to chip whole logs into 3" x 2" x 1" chips. The wood chipper is powered by a 1050 HP 783 kw Catepillar diesel engine.

Building(s): OUTSIDE

**Item 21.3:**

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

Emission Unit: E-AFURN

Emission Unit Description:

The No. 9 and No. 11 submerged three-phase electric arc furnaces convert gravel, woodchips, coke, charcoal and coal into silicon metal or ferrosilicon. The furnaces are each rated at 22 megawatts per hour of input. The processes which comprise this emission unit include raw material handling, ferrosilicon or silicon metal melting and tapping/pouring of molten metal. Each furnace is equipped with a baghouse to control particulate emissions.

A main furnace hood is installed on each furnace and ducted to the baghouses. Emissions from the No. 9 furnace are directed to emission point EP002 and from the No. 11 furnace to emission point EP003.

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Building(s): 00FURNBLDG

**Item 21.4:**

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

Emission Unit: P-ROFIN

Emission Unit Description:

Silicon metal is processed at No. 3 sizing plant. The sizing plant crushes and screens the silicon metal preparing it for distribution. Silicon metal sizing and product handling are the two processes in this unit. Emissions are controlled with baghouses and through the use of covered conveyors and enclosed storage sheds.

Building(s): 00FURNBLDG

**Item 21.5:**

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

Emission Unit: R-DWYPK

Emission Unit Description:

Plant roadways and parking lots are located throughout the facility with fugitive emissions. While some areas are unpaved, the majority of higher traffic areas are paved.

Building(s): OUTSIDE

**Condition 22: Progress Reports Due Semiannually**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 201-6.4 (d) (4)**

**Item 22.1:**

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 23: Air pollution prohibited**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 211.1**

**Item 23.1:**

No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to



property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.

**Condition 24: Maintain all process emission sources, including the associated air pollution control and monitoring equipment Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 212-1.5 (g)**

**Item 24.1:**

At all times, the facility owner or operator must operate and maintain all process emission sources, including the associated air pollution control and monitoring equipment, in a manner consistent with safety, good air pollution control practices, good engineering practices and manufacturers’ recommendations for minimizing emissions.

**Condition 25: Compliance Certification Effective between the dates of 04/21/2016 and 04/20/2021**

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

**Item 25.1:**

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

Emission Unit: 1-RFMON	Emission Point: 00008
Emission Unit: 1-WDCHP	Emission Point: EP005
Emission Unit: E-AFURN	Emission Point: EP002
Emission Unit: E-AFURN	Emission Point: EP003
Emission Unit: P-ROFIN	Emission Point: EP007
Emission Unit: P-ROFIN	Emission Point: EP06A

**Item 25.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Visible emissions from all process emission source or emission points shall not equal or exceed an average 20% opacity during any six consecutive minutes except for the emissions of uncombined water. Opacity observations shall be conducted daily at the baghouse discharge points and the roof monitor.



Daily, the permittee shall conduct a visible emissions survey of all emissions sources, and if visible emissions are observed, corrective action shall be implemented as required by the facility maintenance program and the terms and conditions of this permit.

This Department at any time can request Method 9 evaluations.

Records of these observations shall be kept on-site for a period of 5 years and made available to Department representatives as required.

Parameter Monitored: OPACITY  
Upper Permit Limit: 20 percent  
Reference Test Method: Method 9/Method 22  
Monitoring Frequency: DAILY  
Averaging Method: 6 MINUTE AVERAGE  
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 7/30/2016.  
Subsequent reports are due every 6 calendar month(s).

**Condition 26: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 6 NYCRR 225-1.4 (a)**

**Item 26.1:**  
The Compliance Certification activity will be performed for the Facility.

Regulated Contaminant(s):  
CAS No: 007446-09-5 SULFUR DIOXIDE

**Item 26.2:**  
Compliance Certification shall include the following monitoring:

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

Monitoring Description:  
Coke which exceeds the 1.7 lb/million Btu maximum and 1.4 lb/million Btu consecutive three month average, sulfur in fuel limits of 6NYCRR, Part 225-1.2 (c) for solid fuel, may be used in combination with coal in the furnace charge on a 4:1 coal/coke ratio.

The permittee is required to demonstrate that when using coke with a sulfur content greater than the allowable limit in combination with coal, the sulfur dioxide emissions will not exceed a maximum 3.4 pounds of sulfur dioxide per



million Btu heat input and an average 2.8 pounds of sulfur dioxide per million Btu heat input as determined by:

$$S = (1.1AM + 2BT)/(M + T)$$

where:

S = Allowable sulfur dioxide emission (in pounds per million Btu)

A = Sulfur in oil allowed by Section 225-1.2 of this Subpart (in percent by weight)

B = Average sulfur in solid fuel allowed by Section 225-1.2 of this Subpart (in pounds of sulfur per million Btu gross heat content)

M = Percent of total heat input from liquid fuel

T = Percent of total heat input from solid fuel (including coal, coke, wood, wood waste, and refuse-derived fuel)

Averages are computed for each emission source by dividing the total sulfur content by the total gross heat content of all solid fuel received during any consecutive three-month period.

Records will be maintained on-site as follows:

1. Calculations to demonstrate compliance with the sulfur dioxide limit for each shipment of coke received.
2. The sulfur, ash and Btu content of each shipment of coke received.
3. The total amount of coal and coke charged per batch for each furnace.
4. Sampling, compositing and analysis of fuel samples must be done in accordance with methods acceptable to the Department as required by Part 225-1.6.
5. Records of fuel analyses shall be kept for a period of 5 years and made available to Department representatives on request.

The permittee must submit a written report of the fuel sulfur content exceeding the applicable sulfur-in-fuel limitation, measured emissions exceeding the applicable sulfur-in-fuel limitation, measured emissions exceeding the applicable equivalent emission rate, and the nature and cause of such exceedances if known, for each calendar quarter, within 30 days after the end of any quarterly period in which an exceedance takes place.

The permittee shall submit a written report of any exceedance of the equivalent emission rate within 30 days of determining the exceedance.

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Parameter Monitored: SULFUR CONTENT  
Upper Permit Limit: 1.7 pounds per million Btus  
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 7/30/2016.  
Subsequent reports are due every 6 calendar month(s).

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

**Condition 27: Emission Point Definition By Emission Unit**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

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

**Item 27.1:**

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

Emission Unit: 1-RFMON

Emission Point: 00008

Height (ft.): 95	Length (in.): 2304	Width (in.): 180
NYTMN (km.): 4782.4	NYTME (km.): 171.2	Building: 00FURNBLDG

**Item 27.2:**

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

Emission Unit: 1-WDCHP

Emission Point: EP005

Height (ft.): 15	Diameter (in.): 3	
NYTMN (km.): 4782.4	NYTME (km.): 171.2	Building: OUTSIDE

**Item 27.3:**

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

Emission Unit: E-AFURN

Emission Point: EP002

Height (ft.): 86	Length (in.): 960	Width (in.): 168
NYTMN (km.): 4782.4	NYTME (km.): 171.2	Building: 00FURNBLDG

Emission Point: EP003

Height (ft.): 92	Length (in.): 960	Width (in.): 168
NYTMN (km.): 4782.4	NYTME (km.): 171.2	Building: 00FURNBLDG

**Item 27.4:**



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

Emission Unit: P-ROFIN

Emission Point: EP007

Height (ft.): 16                      Diameter (in.): 25  
NYTMN (km.): 4782.4              NYTME (km.): 171.2              Building: 00FURNBLDG

Emission Point: EP06A

Height (ft.): 10                      Diameter (in.): 48  
NYTMN (km.): 4782.4              NYTME (km.): 171.2              Building: 00FURNBLDG

**Condition 28:      Process Definition By Emission Unit**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

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

**Item 28.1:**

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

Emission Unit: 1-RFMON

Process: VNT                              Source Classification Code: 3-03-007-02

Process Description:

Labyrinth gravity roof ventilators on the north side of the furnace building through which heat and fume are emitted. There are 15 motorized damper panels, total dimensions 200' x 18', which can be opened and closed as needed. These will provide 29.5 building air exchanges per hour.

Emission Source/Control: 0ROOF - Process

**Item 28.2:**

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

Emission Unit: 1-WDCHP

Process: 0WC                              Source Classification Code: 2-02-001-02

Process Description:

Logs are manually fed into chipper and chips are sent to raw material storage piles. Wood chipper is powered by a 1050 HP 783 kw Caterpillar diesel engine.

Emission Source/Control: 1DSEL - Control

Control Type: CATALYTIC OXIDATION

Emission Source/Control: WDCHP - Process

**Item 28.3:**

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

Emission Unit: E-AFURN

Process: P01                              Source Classification Code: 3-99-999-94



Process Description:

Raw Material Handling - Raw Material Transfer and Storage operations begin with the receipt of raw materials via truck or rail. Coal, coke, charcoal, gravel, woodchips, and turnings are unloaded via crane to piles or directly to a below grade conveyor or pit. Coal is transferred to the pit, from which it is conveyed up to enclosed raw material storage bins or unloaded to outdoor storage piles. Gravel is unloaded to piles, transported by crane to a conveyor, screened, and conveyed up to enclosed storage bins. Wood chips are dumped from a trailer to the pit and transported up to enclosed storage bins. From indoor bins, the raw materials are weighed and dropped to a skip bucket from which they are transferred to the top of the furnace.

Emission Source/Control: S0001 - Process

Emission Source/Control: S0002 - Process

**Item 28.4:**

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

Emission Unit: E-AFURN

Process: P02

Source Classification Code: 3-03-007-02

Process Description:

Melting - Silicon or ferrosilicon metal is produced in two three-phase submerged semi-enclosed-type electric arc furnaces identified as emission sources S0003 (furnace No. 9) and S0004 (furnace No. 11) . The submerged arc process is a reduction smelting operation. In the production of silicon metal, quartz is the raw material from which silicon is derived. Carbon is necessary as a reducing agent and is supplied by coal, charcoal, woodchips and possibly coal. In the production of ferrosilicon, iron is added to the raw materials. Smelting in the electric arc furnace is accomplished by conversion of electric energy to heat. An alternating current applied to the electrodes causes a current to flow through the charge from the electrode tips to the furnace hearth. This provides a reaction zone of temperature up to 6000 deg. F. To maintain a uniform electric load, electrode depth is continuously varied automatically, as required. At high temperatures in the reaction zone, the carbon sources react chemically with silicon dioxide gas to form carbon monoxide and silicon metal.

Fume and dust generated and captured throughout the production process including tapping are controlled by the baghouses which vent to emission points EP002 and EP003 and then collected and reused or sold.



Emission Source/Control: S0006 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: S0007 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: S0003 - Process

Emission Source/Control: S0004 - Process

**Item 28.5:**

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

Emission Unit: E-AFURN  
Process: TAP Source Classification Code: 3-03-007-02  
Process Description:

Molten product is tapped from the furnace through a taphole located at the bottom of the furnace at hearth level. The molten metal and dross flow from the tap hole into a ladle. The ladle is moved by a hoist to the casting process. The metal is poured into low, flat chill pans that provide rapid cooling of the molten metal.

Fume and dust generated from the tapping process is pulled by the tap hole fan to the main furnace hood and into the furnace baghouses which vent to emission points EP002 and EP003.

Fumes from the hot metal ladle pour are fugitive inside the building and to the gravity roof ventilators.

Emission Source/Control: S0006 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: S0007 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: S0003 - Process

Emission Source/Control: S0004 - Process

**Item 28.6:**

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

Emission Unit: P-ROFIN  
Process: P03 Source Classification Code: 3-99-999-94  
Process Description:

Silicon Metal Sizing - Sizing operations begin with transport of silicon metal lump from storage or directly to the jaw crusher. From the jaw crusher, product is conveyed to a shaker/screen and transported to sizing or

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to the cone crusher, depending on size. From the cone crusher, the product is transported to a shaker/screen via a covered conveyor and then to sizing. Emissions from this operation are controlled by two baghouses which vent to emission point EP06A. The main baghouse collects emissions generated from crushing and sizing, while a smaller secondary baghouse collects particulate generated from finished product dropping to the floor from a conveyor.

Emission Source/Control: S0010 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: S0014 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: S0009 - Process

**Item 28.7:**

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

Emission Unit: P-ROFIN  
Process: P04 Source Classification Code: 3-99-999-94  
Process Description:

Product Handling - From sizing, product is loaded to boxes, super sacks, or railcars. Hopper and Loading Conveyor involves transfer of sized silicon metal via front end loader to a bin then to a hopper for loadout to railcar. The operation is located indoors next to Sizing Plant No. 3. Conveyors, hopper and loadout point are controlled via cartridge filter venting to emission point EP007.

Emission Source/Control: S0012 - Control  
Control Type: FABRIC FILTER

Emission Source/Control: S0011 - Process

**Item 28.8:**

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

Emission Unit: R-DWYPK  
Process: P05 Source Classification Code: 3-99-999-94  
Process Description:

Roadways & Parking - Transportation on roadways and parking areas cause fugitive emissions.

Emission Source/Control: S0013 - Process

**Condition 29: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 212-2.3 (a)**

**New York State Department of Environmental Conservation**

Permit ID: 9-2911-00078/00009

Facility DEC ID: 9291100078



**Item 29.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 1-RFMON

Process: VNT

Regulated Contaminant(s):

CAS No: 0NY075-02-5 PM 2.5

**Item 29.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Fugitive emissions from the furnace, ladle pour and tapping operations are emitted from the furnace building through the roof gravity ventilator. Particulate emissions, specifically PM-2.5, were calculated using the AP-42 particle sizing chart and emission factors developed from a fugitive emissions study on a similar silicon production facility employing open electric arc furnaces and positive-pressure baghouses. These fugitive emissions were evaluated using AERSCREEN to determine maximum annual and 1-hour impacts for PM 2.5.

PM 2.5 emissions from the roof monitor were estimated at 7.5-10.8 pounds per hour. The AGC for PM-2.5 is 12 ug/m<sup>3</sup>.

The modeled maximum annual impact at 10.8 pounds per hour is 3.122 ug/m<sup>3</sup>.

The SGC is 88 ug/m<sup>3</sup>. The modeled short-term impact concentration is 31.22 ug/m<sup>3</sup>.

Monitoring Frequency: ANNUALLY

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2016.

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

**Condition 30: Compliance Certification**

**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR Part 211**

**Item 30.1:**

The Compliance Certification activity will be performed for:



Emission Unit: 1-WDCHP

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

**Item 30.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

The wood chip piles shall be managed so that fugitive emissions are minimized. Daily observations, when weather conditions permit and especially during dry and windy conditions, of the storage pile area shall be conducted and if visible emissions are observed, the permittee shall implement corrective action including but not limited to the use of water and/or chemical dust suppressants where feasible.

Records of inspections and corrective actions, including date and time, will be kept on-site in a logbook and in a format acceptable to Department representatives.

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

Parameter Monitored: VISIBLE EMISSIONS  
Upper Permit Limit: 1 presence of cond: yes=1; no=0  
Monitoring Frequency: DAILY  
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 7/30/2016.  
Subsequent reports are due every 6 calendar month(s).

**Condition 31: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:40CFR 60.4204(b), NSPS Subpart IIII**

**Item 31.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 1-WDCHP

New York State Department of Environmental Conservation

Permit ID: 9-2911-00078/00009

Facility DEC ID: 9291100078



Regulated Contaminant(s):

CAS No: 000630-08-0 CARBON MONOXIDE

**Item 31.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in Sec. 60.4201(d) for their 2007 model year and later stationary CI ICE, as applicable.

60.4201(d): Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

CFR 94.8 Emissions standards 25<displacement<30 All power levels:

THC+NOx: 11.0 G/KW-HR

CO: 5.0 G/KW-HR

PM: 0.50 G/KW-HR

Parameter Monitored: CARBON MONOXIDE

Upper Permit Limit: 5.0 grams per kilowatt hour

Reference Test Method: Mrthod 10 or 10B

Monitoring Frequency: CONTINUOUS

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

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2017.

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

**Condition 32: Compliance Certification**

Effective between the dates of 04/21/2016 and 04/20/2021

Applicable Federal Requirement:40CFR 60.4207(b), NSPS Subpart IIII

**Item 32.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 1-WDCHP



**Item 32.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

The owner or operator of a stationary compression ignition internal combustion engine with a displacement of less than 30 liters per cylinder and which is subject to the requirements of subpart IIII of 40 CFR Part 60 may not fire diesel fuel above a maximum aromatic content of 35 percent per gallon as referenced in 40 CFR Part 80.510(b) except that any diesel fuel purchased or otherwise obtained prior to October 1, 2010 may be used until depleted. Compliance shall be demonstrated by either sampling each delivery and conducting an appropriate analysis or by obtaining a certificate of analysis showing the aromatic content for each shipment of diesel fuel provided by the fuel supplier. In either case, the owner or operator must verify that any required fuel analysis has been conducted using methodology acceptable to the Department. Records of all certificates of analysis provided by the fuel supplier and on-site fuel sampling results must be maintained on site for a minimum of five years.

Work Practice Type: PARAMETER OF PROCESS MATERIAL

Process Material: DIESEL OIL

Parameter Monitored: AROMATIC CONTENT

Upper Permit Limit: 35 percent

Monitoring Frequency: PER DELIVERY

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

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 33: Compliance Certification**

**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:40CFR 60.4207(b), NSPS Subpart IIII**

**Item 33.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 1-WDCHP

**Item 33.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:





The owner or operator of a stationary compression ignition internal combustion engine displacing less than 30 liters per cylinder and which is subject to the requirements of subpart IIII of 40 CFR Part 60 may not fire diesel fuel below a minimum cetane index of 40 as referenced in 40 CFR Part 80.510(b) except that any diesel fuel purchased or otherwise obtained prior to October 1, 2010 may be used until depleted. Compliance shall be demonstrated by either sampling each delivery and conducting an appropriate analysis or by obtaining a certificate of analysis showing the cetane index for each shipment of diesel fuel provided by the fuel supplier. In either case, the owner or operator must verify that any required fuel analysis has been conducted using methodology acceptable to the Department. Records of all certificates of analysis provided by the fuel supplier and on-site fuel sampling results must be maintained on site for a minimum of five years.

Work Practice Type: PARAMETER OF PROCESS MATERIAL  
Process Material: DIESEL OIL  
Parameter Monitored: CETANE INDEX  
Lower Permit Limit: 40 ratio  
Monitoring Frequency: PER DELIVERY  
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED  
VALUE AT ANY TIME  
Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 34: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 40CFR 60.4207(b), NSPS Subpart IIII**

**Item 34.1:**  
The Compliance Certification activity will be performed for:

Emission Unit: 1-WDCHP

**Item 34.2:**  
Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC  
OPERATIONS

Monitoring Description:

The owner or operator of a stationary compression ignition internal combustion engine displacing less than 30 liters per cylinder and which is subject to the requirements of subpart IIII of 40 CFR Part 60 may not fire any diesel fuel which exceeds a sulfur content of 15 ppm as per the non-road diesel fuel sulfur content standard set forth in 40 CFR Part 80.510(b) except that any diesel fuel purchased or otherwise obtained prior to



October 1, 2010 may be used until depleted. Compliance shall be demonstrated by either sampling each delivery and conducting an appropriate analysis or by obtaining a certificate of analysis showing the sulfur content or range of sulfur content for each shipment of non-road diesel fuel provided by the fuel supplier. In either case, the owner or operator must verify that any required fuel analysis has been conducted using methodology acceptable to the Department. Records of all certificates of analysis provided by the fuel supplier and on-site fuel sampling results must be maintained on site for a minimum of five years.

Work Practice Type: PARAMETER OF PROCESS MATERIAL

Process Material: DIESEL OIL

Parameter Monitored: SULFUR CONTENT

Upper Permit Limit: 15 parts per million by weight

Monitoring Frequency: PER DELIVERY

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

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 35: Compliance Certification**

**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 40CFR 60.4211(a), NSPS Subpart IIII**

**Item 35.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 1-WDCHP

**Item 35.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The owner or operator of a stationary CI internal combustion engine must comply with the emission standards specified in 40 CFR 60 Subpart IIII and must do all of the following:

- (1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
- (2) Change only those emission-related settings that are permitted by the manufacturer; and
- (3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to the facility

**New York State Department of Environmental Conservation**

Permit ID: 9-2911-00078/00009

Facility DEC ID: 9291100078



Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 36: Existing RICE greater than 500 hp at a HAP major facility Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:40CFR 63.6590(a)(1), Subpart ZZZZ**

**Item 36.1:**

This Condition applies to Emission Unit: 1-WDCHP

**Item 36.2:**

An affected source is any existing stationary reciprocating internal combustion engine (RICE) with a site-rating of more than 500 brake horsepower located at a major source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

A stationary RICE is existing if construction or reconstruction commenced before December 19, 2002.

**Condition 37: Compliance Certification Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:40CFR 63.6600(b), Subpart ZZZZ**

**Item 37.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 1-WDCHP

Regulated Contaminant(s):

CAS No: 000630-08-0 CARBON MONOXIDE

**Item 37.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The owner or operator of a new or reconstructed compression ignition (CI) stationary RICE with a site rating of more than 500 brake horsepower located at a major source of HAP emissions must either limit the concentration of formaldehyde or reduce CO emissions.

Emissions of CO must be reduced by 70% or more based on the average of three 1-hour runs.



The facility must also meet and maintain the applicable operating limits listed in table 2b of subpart *ZZZZ*.

Initial compliance will be demonstrated according to the provisions in 40 CFR 63.6630.

If the facility does not use a CO CEMS, the RICE will be required to conduct subsequent performance tests as specified in 40 CFR 63.6615, which requires performance tests to be conducted according to the provisions in 40 CFR 63.6620 semiannually. After the facility has demonstrated compliance for two consecutive tests, the facility may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO percent reduction limit, or if the facility deviates from any operating limits, the facility must resume semiannual performance tests.

Continuous compliance will then be demonstrated according to 40 CFR 63.6640. The facility must keep records according to the provisions in 40 CFR 63.6655 and submit the notifications and reports listed in 40 CFR 63.6645 and 63.6650.

Parameter Monitored: CARBON MONOXIDE

Lower Permit Limit: 70 percent reduction by weight

Reference Test Method: see table 4.1 of subpart *ZZZZ*

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2016.

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

**Condition 38: Compliance Certification**

**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 40CFR 63.6600(b), Subpart *ZZZZ***

**Item 38.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 1-WDCHP

Regulated Contaminant(s):

CAS No: 000050-00-0 FORMALDEHYDE



**Item 38.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The owner or operator of a new or reconstructed compression ignition (CI) stationary RICE with a site rating of more than 500 brake horsepower located at a major source of HAP emissions must either limit the concentration of formaldehyde or reduce CO emissions.

The concentration of formaldehyde in the engine's exhaust must be reduced to 580 ppbvd at 15% oxygen based on the average of three 1-hour runs.

The facility must also meet and maintain the applicable operating limits listed in table 2b of subpart ZZZZ.

Initial compliance will be demonstrated according to the provisions in 40 CFR 63.6630.

Subsequent performance tests will be required as specified in 40 CFR 63.6615, which requires performance tests to be conducted according to the provisions in 40 CFR 63.6620 semiannually. After the facility has demonstrated compliance for two consecutive tests, the facility may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the formaldehyde concentration limit, or if the facility deviates from any operating limits, the facility must resume semiannual performance tests.

Continuous compliance will then be demonstrated according to 40 CFR 63.6640. The facility must keep records according to the provisions in 40 CFR 63.6655 and submit the notifications and reports listed in 40 CFR 63.6645 and 63.6650.

Parameter Monitored: FORMALDEHYDE

Upper Permit Limit: 580 parts per billion by volume  
(dry, corrected to 15% O<sub>2</sub>)

Reference Test Method: see table 4.3 of subpart ZZZZ

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2016.



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

**Condition 39: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 40CFR 63.6600(d), Subpart ZZZZ**

**Item 39.1:**

The Compliance Certification activity will be performed for:

Emission Unit: 1-WDCHP

Regulated Contaminant(s):

CAS No: 000630-08-0 CARBON MONOXIDE

**Item 39.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

The owner or operator of an existing non-emergency stationary CI RICE with a site rating of more than 500 horsepower located at a major source of HAP emissions using an oxidation catalyst to meet the emission limits listed in table 2c of subpart ZZZZ must maintain the pressure drop and temperature across the catalyst.

The temperature of the stationary RICE exhaust must be maintained to keep the catalyst inlet temperature greater than or equal to 450 degrees F and less than or equal to 1350 degrees F.

The pressure drop across the catalyst must not change by more than two inches of water at 100% load plus or minus 10% from the pressure drop across the catalyst that was measured during the initial performance test that is required in 40 CFR 63.6630.

Initial compliance must be demonstrated according to the provisions listed in 40 CFR 63.6630. Continuous compliance will then be demonstrated according to 40 CFR 63.6640. The facility must keep records according to the provisions in 40 CFR 63.6655 and submit the notifications and reports listed in 40 CFR 63.6645 and 63.6650.

Parameter Monitored: PRESSURE DROP

Upper Permit Limit: 2 inches of water

Monitoring Frequency: CONTINUOUS

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 7/30/2016.  
Subsequent reports are due every 6 calendar month(s).

**Condition 40: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 6 NYCRR 212-2.5 (b)**

**Item 40.1:**

The Compliance Certification activity will be performed for:

Emission Unit: E-AFURN

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:

The permittee shall at all times that the submerged electric arc furnaces are in operation, monitor the pressure drop across the plenum and operate within the levels established either during a compliance test or established by the fabric filter manufacturer. The differential pressure across the plenum is indicative of the air flow to the baghouse. A pressure drop of 1 to 15 inches is an ideal operating range. If the pressure drop range changes as a result of filter bag change, the permittee will note the new range and date of bag replacement, and operate within that range. The pressure drop range (s) shall be confirmed in each semi-annual certification report submitted to this Department.

The permittee shall maintain the pressure monitoring device in accordance with the manufacturer's specifications. A spare sensor shall be kept on-site.

At all times that submerged electric arc Furnace 9 is operated, the permittee shall maintain the fan motor power consumption of the fan serving the baghouses at a target amperage range of 100-170.

At all times that submerged electric arc Furnace 11 is operated, the permittee shall maintain the fan motor power consumption of the fan serving the baghouses at a target amperage range of 80-185.



The main plenum temperature for both furnaces shall be < 550 degrees F.

These parameters are diagnostic indicators of baghouse performance and identified as deviations which must be summarized and explained in the semi-annual compliance certifications. Values outside these parameters will require a visual observation of the baghouse outlets. If visible emissions are observed, the permittee will initiate an investigation as to the cause and initiate corrective action as necessary.

In the event that a baghouse compartment is down for maintenance, observations shall be made of the baghouse monovent and the furnace building and the respective furnace load shall be reduced if visible emissions are detected.

In the event of I.D. and/or Reverse Air Fan maintenance, furnace load shall be reduced as well as fan capacity until such time that fans/baghouses are restored to operation condition and furnace load shall than be increased to normal operating level.

Inspection of the #9 and #11 furnace baghouses will be conducted on a daily basis. Each furnace collector has a dedicated computer system which allows personnel to continuously evaluate baghouse and dust handling operating parameters and initiate preventative maintenance, diagnostic, and corrective maintenance programs. In the event, that the computer system malfunctions, the permittee shall manually record the parameters required by this condition.

The permittee shall record in an inspection log the date, time, name of staff person performing inspection, and inspection results for each inspection; and, whenever a problem is discovered, a description of the problem, cause and corrective action taken.

The permittee will conduct compliance verifications including but not limited to production rate, process material, air flow rate, control equipment parameters, visible emissions, etc as appropriate for the circumstances. The permittee will confirm that during source operation all pertinent parameters are within ranges that ensure compliance with the particulate emission rate.

Additionally, the permittee will investigate, in a timely manner, any instance where there is cause to believe that particulate emissions in excess of the particulate limit





are occurring or have occurred. These instances include but are not limited to process upsets, control device malfunctions or problems, abnormal visible emissions, complaints, etc. The permittee shall determine the cause of any exceedance, make the necessary correction, and verify that the excess emissions problem has been corrected.

Records of these verifications, investigations and corrective actions will be kept on-site for a period of 5 years and made available to Department representatives on request. Should the Department determine that permittee's record keeping format is inadequate to demonstrate compliance with this condition, it shall provide written notice to the permittee stating the inadequacies, and permittee shall have 90 days to revise its prospective record keeping format in a manner acceptable to the Department.

Parameter Monitored: PRESSURE CHANGE

Lower Permit Limit: 1 inches of water

Upper Permit Limit: 15 inches of water

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: RANGE-NOT TO FALL OUTSIDE OF STATED RANGE EXCEPT DURING STARTUP/SHUTDOWN

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2017.

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

**Condition 41: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 212-2.5 (b)**

**Item 41.1:**

The Compliance Certification activity will be performed for:

Emission Unit: E-AFURN

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:

The permissible particulate emission rate for each silicon metal production furnace identified as furnaces



No. 9 and No. 11 shall be determined using process weight as established by 6NYCRR, Part 212-2.5 (a) and calculated using the formula set forth in 212-2.5(b) Table 6. The average input of raw materials for each furnace is 25,098 pounds per hour as demonstrated by the tracking of raw material additions averaged annually. Allowable particulate emissions from each furnace based on the average input have been calculated to be 21.3 pounds per hour.

The Department reserves the right to request the performance of a Method 5D emissions evaluation at any time to determine compliance with this limit.

Parameter Monitored: PARTICULATES  
Upper Permit Limit: 21.3 pounds per hour  
Reference Test Method: Method 5D  
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION  
Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST METHOD INDICATED  
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 7/30/2016.  
Subsequent reports are due every 6 calendar month(s).

**Condition 42: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

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

**Item 42.1:**  
The Compliance Certification activity will be performed for:

Emission Unit: E-AFURN

**Item 42.2:**  
Compliance Certification shall include the following monitoring:

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

Monitoring Description:

The permittee operates two submerged electric arc furnaces in the production of silicon metal. The particulate emissions from each furnaces is directed to a dedicated positive-pressure baghouse and then to atmosphere.

Emission point EP0002, located in emission unit E-AFURN,



process P02, is the exhaust for the furnace No. 9 baghouse collector having 11 compartments. Emission point EP0003, located in emission unit E-AFURN, process P02, is the exhaust for the furnace No. 11 baghouse collector, having 8 compartments. The main furnace hoods located at the top of each submerged arc semi-enclosed electric furnace directs fume to the respective baghouse. Potential pre-control emissions of particulates from each emission point exceed the major source threshold of 100 tons per year and therefore each source is subject to the Compliance Assurance Monitoring (CAM) provisions of 40 CFR Part 64.

The permittee has submitted a plan for monitoring to demonstrate that the baghouses are operated and maintained so that they continue to achieve the level of control required by the applicable requirements. The particulate emissions from the furnaces are subject to the process weight limitations set forth in 6NYCRR, Part 212-2.5 (a) and (b) Tables 5 and 6 and the visible emissions limitations of 6NYCRR, 212-1.6.

#### Indicators & Monitoring Frequency:

Visible emissions has been selected as the performance indicator because it is indicative of good operation and maintenance of the baghouse. When the baghouse is operating properly, there will not be any visible emissions from the emission point. Any increase in visible emissions indicates reduced performance of the particulate control device. Normal furnace smelting operations do not produce gas flow or other conditions that adversely affect the baghouse efficiency, so no process operational parameters will be monitored. Visible emissions from the baghouse exhaust are to be monitored twice per shift during a facility survey. In addition to visible emission observations, daily baghouse inspection, maintenance, and recordkeeping will be performed according to the procedures incorporated into this Title V permit.

#### Measurement Approach:

Visible emissions from each baghouse exhaust will be monitored daily, twice per shift during daylight hours, using procedures similar to EPA Reference Method 22. At least one 6-minute observation will be performed daily and recorded in a log book VE's will be performed daily when at least one furnace is operating and hot metal tapping is occurring. Observations will be done during daylight hours unless prohibited by inclement weather; e.g., rain, snow, fog, etc.



Indicator Range:

A deviation is defined as the presence of visible emissions. When a deviation occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All deviations will be documented and reported in accordance with the permit requirements. An indicator range of no visible emissions was selected because an increase in visible emissions is indicative of an increase in particulate emissions.

Performance Criteria:

Opacity observations are made at the emission point during source operation. Visible emissions will result in the implementation of inspection and maintenance procedures.

QA/QC:

Measurements will be made at the baghouse exhaust. The observer will be familiar with normal furnace operation and EPA Reference Methods 9 and 22.

Deviation Response:

Upon noting visible emissions, the observer will immediately notify maintenance to inspect the baghouse, and operations to reduce furnace operations as feasible. Maintenance personnel will inspect the baghouse within 4 hours of receiving notification and make needed repairs as soon as practicable. Operations will return to normal upon completed corrective action.

QIP Threshold:

The selected Quality Improvement Plan (QIP) threshold for observed visible emissions from each baghouse is 5 excursions in a 6-month reporting period. This level represents approximately 5 percent of the total number of daily visible emissions observations when the furnaces are operating in full production. If the QIP threshold is exceeded in a semi-annual reporting period, a QIP will be developed and submitted if requested by this Department.

Parameter Monitored: VISIBLE EMISSIONS

Upper Permit Limit: 1 presence of cond: yes=1; no=0

Reference Test Method: Method 9/Method 22

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING

DESCRIPTION

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 7/30/2016.  
Subsequent reports are due every 6 calendar month(s).

**Condition 43: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR Part 211**

**Item 43.1:**

The Compliance Certification activity will be performed for:

Emission Unit: E-AFURN  
Process: P01

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:

The permittee shall employ reasonably available control measures to reduce fugitive emissions from raw material unloading stations for railcars and/or trucks, raw material conveyors, raw material handling operations, and raw material transfer points.

Loading or unloading of raw material trucks, baghouse fines, etc., shall be conducted in a manner or in an enclosed area to prevent re-entrainment of air pollutants.

For each raw material loading/unloading station for railcars or trucks, raw material conveyor, raw material handling operation, and raw material transfer point that is not enclosed, the drop heights for unloading shall be minimized and loading/unloading shall occur at a rate to minimize fugitive emissions.

The permittee shall employ good operating practices to minimize wind erosion from storage piles.

If fugitive emissions are observed during normal operation, the application of water and/or wet suppressants at sufficient treatment frequencies will be required as soon as possible.

Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times.

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Daily, the permittee shall inspect these areas and record in an inspection log, which shall be made available for Department review upon request, the following information: Date, time, name of staff person performing inspection, and inspection results for each inspection; and, whenever a problem is discovered, a description of the problem, cause and corrective action taken.

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

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

Parameter Monitored: VISIBLE EMISSIONS

Upper Permit Limit: 1 presence of cond: yes=1; no=0

Monitoring Frequency: DAILY

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 7/30/2016.

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

**Condition 44: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR 212-3.1 (c) (3)**

**Item 44.1:**

The Compliance Certification activity will be performed for:

Emission Unit: E-AFURN

Process: P02

Regulated Contaminant(s):

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

**Item 44.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

The two submerged electric arc furnaces, each having



actual nitrogen oxide (NO<sub>x</sub>) emissions of 87.6 pounds per hour and a combined total of 767.3 tons per year are subject to the Reasonably Available Control requirements (RACT) set forth in 6NYCRR, Part 212-3 for major sources of nitrogen oxides. As part of the initial 1999 Title V application Globe submitted as a compliance plan a RACT analysis which evaluated the technical and economic feasibility of available control technologies for electric arc furnaces. The analysis determined that there is no control technology available for these process sources to comply with the RACT requirements for nitrogen oxides and requested a variance from the RACT control strategy requirements. This Department and the USEPA in the 11/25/98 correspondence from R.Ruvo(EPA) to J. DiPronio(DEC) 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). The special conditions to establish RACT are incorporated into this Title V permit as follow:

- 1.) Nitrogen Oxide emissions from both furnaces are limited to 175.2 pounds per hour and 767.3 tons per year. These emissions correspond to an average raw material input rate of 25,098 pounds per hour as demonstrated by the tracking of raw material inputs averaged annually. The appropriate production recordkeeping will be maintained to demonstrate compliance with these limits and made available to Department representatives upon request.
- 2.) The permittee is to maintain the refractory on each unit as per the established facility maintenance protocol.
- 3.) The permittee must continue to evaluate control technologies and other compliance strategies and provide documentation of such evaluation to this Department with each permit renewal. RACT was re-evaluated as part of this permit action and determined that there are no new control technologies or operational methods to reduce NO<sub>x</sub> which can be implemented.

Parameter Monitored: RAW MATERIAL  
Upper Permit Limit: 25098 pounds per hour  
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION  
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 7/30/2016.  
Subsequent reports are due every 6 calendar month(s).

**Condition 45: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 6 NYCRR 212-1.5 (g)**

**Item 45.1:**

The Compliance Certification activity will be performed for:

Emission Unit: E-AFURN  
Process: TAP

**Item 45.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The permittee shall minimize fugitive emissions from casting, molten slag handling and ladle operations. Emissions which occur at the pouring section of the floor are vented into the building, and are then through roof-mounted gravity ventilators, which have a lateral discharge to the north. The total discharge rate from the roof monitor was calculated at approximately 682,000 cfm and provides building ventilation and discharge fugitive emissions from pouring and cooling of molds. The following work practices are to be implemented as follows:

For casting operations:

1. Removal of non-process material in chills prior to pouring to chills.
2. Keep ladle lip close to chills during pouring to chills.
3. Reduce refining gas flow during pouring to chills.
4. Reduce molten metal temperature prior to pouring to chills.

For molten slag handling operations:

1. After the pouring has been completed, the ladle is brought to a full upright position and moved to the rakeout station.
2. The bottom blowing system remains on low-flow mode through the entire rakeout and repositioning process.
3. The ladle is lowered as close to the bottom of the pit as possible and slowly turned completely over to dump any loose slag.
4. The ladle then is raised parallel to the ground and the harder-to-remove slag is "raked" out by the operator using a rakeout machine.
5. The ladle is once again lowered close to the ground and





turned completely over to dump any slag remaining in the ladle.

6. The ladle is righted and moved back into the pit.

The tapping and poling hoods and gates shall be positioned and all tapping operation fans and hoods will be operated to assure maximum feasible capture of emissions during all tapping operations including during ladle additions, blowing tapholes, poling, oxygen lancing operations, plugging, burning, and switching ladles.

Within 18 months from the issuance of this permit, the permittee shall submit an engineering feasibility study to evaluate the design and implementation of a fugitive emission capture system consisting of local ventilation to capture and control fume emissions during ladle treatment and casting. The results of this study shall be submitted to the Region 9 Division of Air.

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 7/30/2016.

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

**Condition 46: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement: 6 NYCRR 212-1.5 (g)**

**Item 46.1:**

The Compliance Certification activity will be performed for:

Emission Unit: E-AFURN

Process: TAP

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:

Each silicon furnace is equipped with a single tap hole fan that draws fume from the tap hole to the main furnace



hood on the charging floor where it combines with furnace fume and drawn into the main baghouse. Each fan has an identical rating.

The permittee shall measure and continuously record the tapping fan(s) power consumption. The device shall be maintained and calibrated annually to demonstrate an accuracy of  $\pm 5$  percent over its operating range.

During tapping of each furnace, the power to the variable speed tap fan(s) will operate at the maximum frequency of 50 hertz.

All tapping operation fans and hoods will be operated and maintained to assure maximum feasible capture of emissions during all tapping operations including during ladle additions, blowing tapholes, poling, oxygen lancing operations, plugging, and switching ladles.

Records are to be kept on-site, including date and time, of the fan speed, amperage, and all fan maintenance and fan replacement including the length of the outage to conduct fan repairs. During periods of tap fan outage, tapping is not to occur. Records are to be maintained either electronically or in a bound book for a period of five years and made accessible to Department representatives on request. In the event that there is a computer malfunction, readings shall be manually documented.

Parameter Monitored: POWER

Lower Permit Limit: 50 Hertz

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE - SEE MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2016.

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

**Condition 47: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

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

**Item 47.1:**

The Compliance Certification activity will be performed for:

Emission Unit: P-ROFIN

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Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 47.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

Emissions of solid particulate from emission point EP007, associated with product handling operations, and emission point EP06A, associated with silicon metal sizing operations, shall not exceed 0.05 gr/dscf. The Department reserves the right to require the performance of a Method 5 emissions evaluation at any time to determine compliance with this limit.

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

Records of these verifications, investigations and corrective actions shall be kept in a log book and in a format easily accessible to Department representatives. These records shall be kept on-site for a period of 5 years and made available on request.

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

Parameter Monitored: PARTICULATES

Upper Permit Limit: 0.05 grains per dscf

Reference Test Method: Method 5

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING  
DESCRIPTION

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

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2016.

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



**Condition 48: Compliance Certification**  
Effective between the dates of 04/21/2016 and 04/20/2021

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

**Item 48.1:**

The Compliance Certification activity will be performed for:

Emission Unit: P-ROFIN

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 48.2:**

Compliance Certification shall include the following monitoring:

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

Monitoring Description:

A main baghouse collects particulate emissions generated from crushing and sizing of silicon metal, while a smaller secondary baghouse collects particulate generated from finished product dropping to the floor from a conveyor. A third baghouse collects emissions from railcar loading operations.

The pressure drop across the baghouse will be monitored and recorded daily for the crushing and sizing baghouse, emission source S0010 and emission source S0014 which exhaust to emission point EP06A and the railcar loadout/conveyor baghouse, emission source S0012 (emission point EP007).

These parameters are diagnostic indicators of baghouse performance and deviations which must be summarized and explained in the semi-annual compliance certifications. Values outside these parameters will require a visual observation of the baghouse outlets. If visible emissions are observed, the permittee will initiate an investigation as to the cause and initiate corrective action as necessary.

Each excursion outside the operational ranges except during startup and shut down periods, including date and time, cause, and corrective action taken, shall be recorded in a logbook and kept on site. Exceedance of operational range (s) shall not be considered a violation of an emission limit of this permit, unless the exceedance is also accompanied by other information demonstrating that a violation of an emission limit has taken place. Reports of these excursions shall be submitted



semi-annually.

If the pressure drop range changes as a result of filter bag change, the permittee will note the new range and date of bag replacement in a log book, and operate within that range. The new range shall be noted in the semi-annual certification reports submitted to this Department.

The permittee will perform daily checks, when the emission source(s) are in operation and weather permits, for the presence of visible emissions from the stacks and for visible fugitive emissions from any egress point such as the building, doors associated with this emissions unit. If visible emissions are noted, they shall be documented (including date and time), the cause determined, and corrective action implemented.

Records of minor corrective actions including maintenance, electrical and operational changes will be recorded in baghouse logbooks. All other corrective actions will be filed with the visible emissions observations and maintenance inspection logs. These records shall be kept on-site for a period of 5 years and made available to Department representatives on request.

Parameter Monitored: PRESSURE DROP

Lower Permit Limit: 1 inches of water

Upper Permit Limit: 10 inches of water

Monitoring Frequency: DAILY

Averaging Method: RANGE-NOT TO FALL OUTSIDE OF STATED RANGE EXCEPT DURING STARTUP/SHUTDOWN

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2016.

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

**Condition 49: Compliance Certification**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable Federal Requirement:6 NYCRR Part 211**

**Item 49.1:**

The Compliance Certification activity will be performed for:

Emission Unit: R-DWYPK

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 49.2:**

Compliance Certification shall include the following monitoring:



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

Monitoring Description:

The permittee shall employ techniques to reduce fugitive emissions from paved and unpaved roadways and material transfer, storage and handling as described in the facility fugitive dust control plan. The failure to implement the control strategies described in the plan and below will be considered a violation of 6NYCRR, Part 211 which prohibits air pollution.

Daily, except when covered with snow, the permittee shall inspect roadways and initiate corrective action to comply with the facility dust control program when required as follows:

The permittee shall employ reasonably available control measures to reduce fugitive emissions from all paved and unpaved roadways and parking areas by speed reduction, sweeping, the application of water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. The implementation of control measures shall be determined by weather conditions and the severity of dry and/or windy conditions.

The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, material from paved areas onto which has been deposited by trucking or earth moving equipment or erosion by water or other means.

Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

Parameter Monitored: VISIBLE EMISSIONS

Upper Permit Limit: 1 presence of cond: yes=1; no=0

Reference Test Method: Method 22

Monitoring Frequency: DAILY

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 7/30/2016.



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 50: Contaminant List**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

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

**Item 50.1:**

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

CAS No: 000050-00-0  
Name: FORMALDEHYDE





CAS No: 000630-08-0  
Name: CARBON MONOXIDE

CAS No: 007446-09-5  
Name: SULFUR DIOXIDE

CAS No: 065996-93-2  
Name: PITCH, COAL TAR, HIGH-TEMP.

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

CAS No: 0NY075-02-5  
Name: PM 2.5

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

**Condition 51: Malfunctions and start-up/shutdown activities**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

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

**Item 51.1:**

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

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

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

(d) The department may also require the owner or operator to include, in reports described under Subdivisions (b) and (c) of this Section, an estimate of the maximum ground level



concentration of each air contaminant emitted and the effect of such emissions.

(e) A violation of any applicable emission standard resulting from start-up, shutdown, or malfunction conditions at a permitted or registered facility may not be subject to an enforcement action by the department and/or penalty if the department determines, in its sole discretion, that such a violation was unavoidable. The actions and recordkeeping and reporting requirements listed above must be adhered to in such circumstances.

**Condition 52: Visible Emissions Limited**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable State Requirement:6 NYCRR 211.2**

**Item 52.1:**

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

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

**Condition 53: Compliance Demonstration**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable State Requirement:6 NYCRR 212-2.3 (b)**

**Item 53.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-RFMON  
Process: VNT

Regulated Contaminant(s):  
CAS No: 065996-93-2      PITCH, COAL TAR, HIGH-TEMP.

**Item 53.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Polycyclic aromatic hydrocarbon (PAH) as coal tar volatile emissions were estimated based on samples collected from employee industrial hygiene monitoring. Results demonstrated that the maximum impacts for all contaminants of concern were less than their respective annual (AGC) and short-term guideline (SGC) concentrations. Coal tar volatiles annual impact for 0.332 pounds per hour was 0.09487 compared to an AGC of 0.48 ug/m<sup>3</sup>.



The permittee shall calculate the emission rate of PAH from all sources, the roof vent and baghouse stacks, and report this information in subsequent emission statements. Emission factors from similar source tests or published emission factors may be used.

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 7/30/2016.  
Subsequent reports are due every 6 calendar month(s).

**Condition 54: Compliance Demonstration**  
**Effective between the dates of 04/21/2016 and 04/20/2021**

**Applicable State Requirement:6 NYCRR 211.2**

**Item 54.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: E-AFURN

**Item 54.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The permittee shall perform daily checks, when the furnaces are in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident;
- and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer may indicate that the

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visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

The permittee shall maintain a record of each time a control measure for this emissions unit is not implemented in accordance with the fugitive dust control plan for the facility.

The permittee shall submit semi-annual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions.

Parameter Monitored: VISIBLE EMISSIONS

Lower Permit Limit: 0 presence of cond: yes=1; no=0

Upper Permit Limit: 1 presence of cond: yes=1; no=0

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

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 7/30/2016.

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

