New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 9-2911-00078/00009
Renewal Number: 3
04/22/2016

Facility Identification Data
Name: GLOBE METALLURGICAL INC
Address: 3807 HIGHLAND AVE
NIAGARA FALLS, NY 14305

Owner/Firm
Name: GLOBE METALLURGICAL INC
Address: PO BOX 157
BEVERLY, OH 45715-0157, USA
Owner Classification: Corporation/Partnership

Permit Contacts
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Permit Description

Introduction

The Title V operating air permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose for this permit review report is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that this permit review report, while based on information contained in the permit, is a separate document and is not itself an enforceable term and condition of the permit.

Summary Description of Proposed Project
This application represents the renewal of the Title V permit under the terms and conditions of 6NYCRR, Part 201-6.

Attainment Status
GLOBE METALLURGICAL INC is located in the town of NIAGARA FALLS in the county of NIAGARA.
The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

Criteria Pollutant	Attainment Status
Particulate Matter (PM)	ATTAINMENT
Particulate Matter< 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	MARGINAL NON-ATTAINMENT
Oxides of Nitrogen (NOx)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT

* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.
** NOx has a separate ambient air quality standard in addition to being an ozone precursor.

Facility Description:
Globe Metallurgical, Niagara Falls, is a silicon metal production facility that employs two 22 MW submerged-arc semi-enclosed electric furnaces. Auxiliary operations include raw material storage and handling, product formulation, sizing, and packaging and fume process and loadout.

Permit Structure and Description of Operations
The Title V permit for GLOBE METALLURGICAL INC
is structured in terms of the following hierarchy: facility, emission unit, emission point, emission source and process. A facility is defined as all emission sources located at one or more adjacent or contiguous properties owned or operated by the same person or persons under common control. The facility is subdivided into one or more emission units (EU). Emission units are defined as any part or activity of a stationary facility that emits or has the potential to emit any federal or state regulated air pollutant. An emission unit is represented as a grouping of processes (defined as any activity involving one or more emission sources (ES) that emits or has the potential to emit any federal or state regulated air pollutant). An emission source is defined as any apparatus, contrivance or machine capable of causing emissions of any air contaminant to the outdoor atmosphere, including any appurtenant exhaust system or air cleaning device. [NOTE: Indirect sources of air contamination as defined in 6 NYCRR Part 203 (i.e. parking lots) are excluded from this definition]. The applicant is required to identify the principal piece of equipment (i.e., emission source) that directly results in or controls the emission of federal or state regulated air pollutants from an activity (i.e., process). Emission sources are categorized by the following types:
combustion - devices which burn fuel to generate heat, steam or power
incinerator - devices which burn waste material for disposal
control - emission control devices

process - any device or contrivance which may emit air contaminants that is not included in the above categories.

GLOBE METALLURGICAL INC is defined by the following emission unit(s):

Emission unit EAFURN - The No. 9 and No. 11 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 are 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.

Emission unit EAFURN is associated with the following emission points (EP):
EP002, EP003
Process: P01 is located at South of FURNBLDG - 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.

Process: P02 is located at Center of building, Building 00FURNBLDG - Melting - Silicon or ferrosilicon metal is produced in two submerged-arc semi-enclosed-type electric 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 coke, charcoal, coal, and woodchips. 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.

Process: TAP is located at Building 00FURNBLDG - 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 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 re-used or sold.

Emission unit PROFIN - 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.

Emission unit PROFIN is associated with the following emission points (EP):
EP007, EP06A
Process: P03 is located at East & west sides, Building 00FURNBLDG - 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 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.

Process: P04 is located at East & west sides, Building 00FURNBLDG - 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 unit RDWYPK - 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.

Process: P05 is located at Building OUTSIDE - Roadways & Parking - Transportation on roadways and parking areas cause fugitive emissions.

Emission unit 1RFMON - This emission unit represents a gravity roof ventilator system on the north side of the furnace building roof.

Emission unit 1RFMON is associated with the following emission points (EP):
00008
Process: VNT is located at Building 00FURNBLDG - Labyrinth gravity ventilators used to ventilate furnace building of heat and fume. There are 15 motorized damper panels which can be opened and closed as needed. These will provide 29.5 building air exchanges per hour.

Emission unit 1WDCHP - 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.

Emission unit 1WDCHP is associated with the following emission points (EP):
EP005
Process: 0WC is located at Building OUTSIDE - 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 Catepillar diesel engine.

GLOBE METALLURGICAL INC is subject to Title V requirements. This determination is based on the following information:

Globe is a major source subject to Title V permitting requirements for having actual emissions of particulates greater than 100 tpy, nitrogen oxides greater than 100 tpy, carbon monoxide greater than 100 tpy, sulfur dioxide greater than 100 tpy, and hydrogen chloride, a hazardous air pollutant, greater than 10 tpy.

Program Applicability

The following chart summarizes the applicability of GLOBE METALLURGICAL INC with regards to the principal air pollution
regulatory programs:

Regulatory Program	Applicability
PSD	NO
NSR (non-attainment)	NO
NESHAP (40 CFR Part 61)	NO
NESHAP (MACT - 40 CFR Part 63)	YES
NSPS	YES
TITLE IV	NO
TITLE V	YES
TITLE VI	NO
RACT	YES
SIP	YES

NOTES:

PSD Prevention of Significant Deterioration (40 CFR 52, 6 NYCRR 231-7, 231-8) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NSR New Source Review (6 NYCRR 231-5, 231-6) - requirements which pertain to major stationary sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NESHAP National Emission Standards for Hazardous Air Pollutants (40 CFR 61, 6 NYCRR 200.10) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's).

MACT Maximum Achievable Control Technology (40 CFR 63, 6 NYCRR 200.10) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated industry, otherwise known as MACT. The corresponding regulations apply to specific source types and contaminants.

NSPS New Source Performance Standards (40 CFR 60, 6 NYCRR 200.10) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

Title IV Acid Rain Control Program (40 CFR 72 thru 78, 6 NYCRR 201-6) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

Title VI Stratospheric Ozone Protection (40 CFR 82, Subpart A thru G, 6 NYCRR 200.10) - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.

RACT Reasonably Available Control Technology (6 NYCRR Parts 212.10, 226, 227-2, 228, 229, 230, 232, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by application of control technology that is reasonably available, considering technological and economic feasibility. RACT is a control strategy used to limit emissions of VOC's and NOx for the purpose of attaining the air quality standard for ozone. The term as it is used in the above table refers to those state air pollution control regulations which specifically regulate VOC and NOx emissions.

SIP State Implementation Plan (40 CFR 52, Subpart HH, 6 NYCRR 200.10) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

Compliance Status
Facility is in compliance with all requirements.

SIC Codes
SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis
of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

SIC Code	Description
3313	ELECTROMETALLURGICAL PRODUCTS
3339	PRIMARY NONFERROUS METALS, NEC

SCC Codes
SCC or Source Classification Code is a code developed and used" by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information.Each SCC represents

a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

SCC Code	Description
2-02-001-02	INTERNAL COMBUSTION ENGINES - INDUSTRIAL INDUSTRIAL INTERNAL COMBUSTION ENGINE - DISTILLATE OIL(DIESEL) Reciprocating
3-03-007-02	PRIMARY METAL PRODUCTION PRIMARY METAL PRODUCTION - SEMI-COVERED FURNACE ELECTRIC ARC FURNACE:OTHER ALLOYS/SPECIFY
3-99-999-94	MISCELLANEOUS MANUFACTURING INDUSTRIES MISCELLANEOUS INDUSTRIAL PROCESSES Other Not Classified

Facility Emissions Summary

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant , including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount or material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE Range represents an emission range for a contaminant. Any PTE quantity that is displayed represents a facility-wide emission cap or limitation for that contaminant. If no PTE quantity is displayed, the PTE Range is provided to indicate the approximate magnitude of facility-wide emissions for the specified contaminant in terms of tons per year (tpy). The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant Name	PTE lbs/yr	PTE Range
000630-08-0	CARBON MONOXIDE		>= 100 tpy but < 250 tpy
000050-00-0	FORMALDEHYDE		> 0 but < 10 tpy
007647-01-0	HYDROGEN CHLORIDE		>= 10 tpy
007439-92-1	LEAD		> 0 but < 10 tpy
0NY210-00-0	OXIDES OF NITROGEN		>= 250 tpy but < 75,000 tpy
0NY075-00-0	PARTICULATES		>= 250 tpy but < 75,000 tpy
065996-93-2	PITCH, COAL TAR, HIGH-TEMP.		>= 2.5 tpy but < 10 tpy
0NY075-02-5	PM 2.5		>= 25 tpy but < 40 tpy
0NY075-00-5	PM-10		>= 100 tpy but < 250 tpy
130498-29-2	POLYCYCLIC AROMATIC HYDROCARBONS		> 0 but < 10 tpy

0B2945-52-5	SILICA, AMORPHOUS, FUMED, CRYSTALLINE FREE	>= 100 tpy but < 250 tpy
007446-09-5	SULFUR DIOXIDE	>= 250 tpy but < 75,000 tpy
0NY100-00-0	TOTAL HAP	>= 10 tpy but < 25 tpy
0NY998-00-0	VOC	>= 50 tpy but < 100 tpy

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

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 Part 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 Part 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 Part 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 Part 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 Part 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 Part 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 Part 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 2 01-6.7 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.

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

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.

Regulatory Analysis

Location Facility/EU/EP/Process/ES	Regulation	Condition	Short Description
FACILITY	ECL 19-0301	50	Powers and Duties of the Department with respect to air pollution control
1-WDCHP	40CFR 60-IIII.4204(b)	31	Emission standards - 2007 or later Non-emergency Stationary CI-IC Engines Displacing <30 liters/cylinder

1-WDCHP	40CFR 60-IIII.4207(b)	32, 33, 34	Stationary Compression Ignition IC Engines - Fuel Requirements beginning October 1, 2010
1-WDCHP	40CFR 60-IIII.4211(a)	35	Stationary Compression Ignition Engines - Compliance Requirements
1-WDCHP	40CFR 63-ZZZZ.6590(a)(1	36	Reciprocating Internal Combustion Engine (RICE) NESHAP - Applicability - Existing RICE
1-WDCHP	40CFR 63-ZZZZ.6600(b)	37, 38	Reciprocating Internal Combustion Engine (RICE) NESHAP - Emission limits and operating limits for new lean burn engines
1-WDCHP	40CFR 63-ZZZZ.6600(d)	39	Reciprocating Internal Combustion Engine (RICE) NESHAP - Emission limits and operating limits for existing CI engines
E-AFURN	40CFR 64	42	COMPLIANCE ASSURANCE MONITORING
FACILITY	40CFR 68	19	Chemical accident prevention provisions
FACILITY	40CFR 82-F	20	Protection of Stratospheric Ozone - recycling and emissions reduction
FACILITY	6NYCRR 200.6	1	Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	10	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	51	Unavoidable noncompliance and violations
FACILITY	6NYCRR 201-1.7	11	Recycling and Salvage
FACILITY	6NYCRR 201-1.8	12	Prohibition of reintroduction of collected contaminants to the air
FACILITY	6NYCRR 201-3.2(a)	13	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-3.3(a)	14	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6	21, 27, 28	Title V Permits and the Associated Permit Conditions
FACILITY	6NYCRR 201-6.4(a)(4)	15	General Conditions - Requirement to Provide Information
FACILITY	6NYCRR 201-6.4(a)(7)	2	General Conditions - Fees
FACILITY	6NYCRR 201-6.4(a)(8)	16	General Conditions - Right to Inspect
FACILITY	6NYCRR 201-6.4(c)	3	Recordkeeping and Reporting of

FACILITY	6NYCRR 201-6.4(c)(2)	4	Compliance Monitoring Records of Monitoring, Sampling and Measurement
FACILITY	6NYCRR 201-6.4(c)(3)(ii	5	Reporting Requirements - Deviations and Noncompliance
FACILITY	6NYCRR 201-6.4(d)(4)	22	Compliance Schedules - Progress Reports
FACILITY	6NYCRR 201-6.4(e)	6	Compliance Certification
FACILITY	6NYCRR 201-6.4(f)(6)	17	Off Permit Changes
FACILITY	6NYCRR 202-1.1	18	Required emissions tests.
FACILITY	6NYCRR 202-2.1	7	Emission Statements - Applicability
FACILITY	6NYCRR 202-2.5	8	Emission Statements - record keeping requirements.
1-WDCHP	6NYCRR 211	30	General Prohibitions
E-AFURN/-/P01	6NYCRR 211	43	General Prohibitions
R-DWYPK	6NYCRR 211	49	General Prohibitions
FACILITY	6NYCRR 211.1	23	General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 211.2	52	General Prohibitions - visible emissions limited.
E-AFURN	6NYCRR 211.2	54	General Prohibitions - visible emissions limited.
FACILITY	6NYCRR 212-1.5(g)	24	Maintain all process emission sources, including the associated air pollution control and monitoring equipment
E-AFURN/-/TAP	6NYCRR 212-1.5(g)	45, 46	Maintain all process emission sources, including the associated air pollution control and monitoring equipment
FACILITY	6NYCRR 212-1.6(a)	25	Limiting of Opacity
1-RFMON/-/VNT	6NYCRR 212-2.3(a)	29	Criteria air contaminants applicable to Table 3
1-RFMON/-/VNT	6NYCRR 212-2.3(b)	53	Non-Criteria air contaminants subject Table 4
P-ROFIN	6NYCRR 212-2.4(b)	47, 48	Control of Particulate from New and Modified Process Emission Sources
E-AFURN	6NYCRR 212-2.5(b)	40, 41	Table 6 Permissible Emission Rate
E-AFURN/-/P02	6NYCRR 212-3.1(c)(3)	44	RACT compliance plans for NOx emission points
FACILITY	6NYCRR 215.2	9	Open Fires - Prohibitions
FACILITY	6NYCRR 225-1.4(a)	26	Fuel Mixtures or Equivalent Emission

Rate Variances

Applicability Discussion:
Mandatory Requirements: The following facility-wide regulations are included in all Title V permits:

ECL 19-0301
This section of the Environmental Conservation Law establishes the powers and duties assigned to the Department with regard to administering the air pollution control program for New York State.

6 NYCRR 200.6
Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

6 NYCRR 200.7
Anyone owning or operating an air contamination source which is equipped with an emission control device must operate the control consistent with ordinary and necessary practices, standards and procedures, as per manufacturer's specifications and keep it in a satisfactory state of maintenance and repair so that it operates effectively

6 NYCRR 201-1.4
This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable state enforceable emission standard that results from a necessary scheduled equipment maintenance, start-up, shutdown, malfunction or upset in the event that these are unavoidable.

6 NYCRR 201-1.7
Requires the recycle and salvage of collected air contaminants where practical

6 NYCRR 201-1.8
Prohibits the reintroduction of collected air contaminants to the outside air

6 NYCRR 201-3.2 (a)
An owner and/or operator of an exempt emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains exempt emission sources or units, 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.

6 NYCRR 201-3.3 (a)
The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains trivial emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR Subpart 201-6
This regulation applies to those terms and conditions which are subject to Title V permitting. It establishes the applicability criteria for Title V permits, the information to be included in all Title V permit applications as well as the permit content and terms of permit issuance. This rule also specifies the compliance, monitoring, recordkeeping, reporting, fee, and procedural requirements that need to be met to

obtain a Title V permit, modify the permit and demonstrate conformity with applicable requirements as listed in the Title V permit. For permitting purposes, this rule specifies the need to identify and describe all emission units, processes and products in the permit application as well as providing the Department the authority to include this and any other information that it deems necessary to determine the compliance status of the facility.

6 NYCRR 201-6.4 (a) (4)
This mandatory requirement applies to all Title V facilities. It requires the permittee to provide information that the Department may request in writing, within a reasonable time, in order to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The request may include copies of records required to be kept by the permit.

6 NYCRR 201-6.4 (a) (7)
This is a mandatory condition that requires the owner or operator of a facility subject to Title V requirements to pay all applicable fees associated with the emissions from their facility.

6 NYCRR 201-6.4 (a) (8)
This is a mandatory condition for all facilities subject to Title V requirements. It allows the Department to inspect the facility to determine compliance with this permit, including copying records, sampling and monitoring, as necessary.

6 NYCRR 201-6.4 (c)
This requirement specifies, in general terms, what information must be contained in any required compliance monitoring records and reports. This includes the date, time and place of any sampling, measurements and analyses; who performed the analyses; analytical techniques and methods used as well as any required QA/QC procedures; results of the analyses; the operating conditions at the time of sampling or measurement and the identification of any permit deviations. All such reports must also be certified by the designated responsible official of the facility.

6 NYCRR 201-6.4 (c) (2)
This requirement specifies that all compliance monitoring and recordkeeping is to be conducted according to the terms and conditions of the permit and follow all QA requirements found in applicable regulations. It also requires monitoring records and supporting information to be retained for at least 5 years from the time of sampling, measurement, report or application. Support information is defined as including all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

6 NYCRR 201-6.4 (c) (3) (ii)
This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

6 NYCRR 201-6.4 (d) (5)
This condition applies to every Title V facility subject to a compliance schedule. It requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted semiannually.

6 NYCRR 201-6.4 (e)
Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

6 NYCRR 201-6.4 (f) (6)
This condition allows changes to be made at the facility, without modifying the permit, provided the changes do not cause an emission limit contained in this permit to be exceeded. The owner or operator of the facility must notify the Department of the change. It is applicable to all Title V permits which may be subject to an off permit change.

6 NYCRR 202-1.1
This regulation allows the department the discretion to require an emission test for the purpose of determining compliance. Furthermore, the cost of the test, including the preparation of the report are to be borne by the owner/operator of the source.

6 NYCRR 202-2.1
Requires that emission statements shall be submitted on or before April 15th each year for emissions of the previous calENDar year.

6 NYCRR 202-2.5
This rule specifies that each facility required to submit an emission statement must retain a copy of the statement and supporting documentation for at least 5 years and must make the information available to department representatives.

6 NYCRR 211.2
This regulation limits opacity from sources to less than or equal to 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

6 NYCRR 215.2
Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

40 CFR Part 68
This Part lists the regulated substances and there applicability thresholds and sets the requirements for stationary sources concerning the prevention of accidental releases of these substances.

40 CFR Part 82, Subpart F
Subpart F requires the reduction of emissions of class I and class II refrigerants to the lowest achievable level during the service, maintenance, repair, and disposal of appliances in accordance with section 608 of the Clean Air Act AmENDments of 1990. This subpart applies to any person servicing, maintaining, or repairing appliances except for motor vehicle air conditioners. It also applies to persons disposing of appliances, including motor vehicle air conditioners, refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment. Those individuals, operations, or activities affected by this rule, may be required to comply with specified disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.

Facility Specific Requirements
In addition to Title V, GLOBE METALLURGICAL INC has been determined to be subject to the following regulations:
40 CFR 60.4204 (b)
This regulation requires owners and/or operators of 2007 model year or later non-emergency stationary compression ignition internal combustion engines displacing less than 30 liters per cylinder to purchase

engines that meet the emission standards referenced in 40 CFR 60.4201 and maintain those engines according to manufacturer's specifications.

40 CFR 60.4207 (b)
These conditions states the fuel requirements for compression ignition stationary engines with a displacement of less than 30 liters per cylinder

40 CFR 60.4211 (a)
This regulation states that the owner or operator and must comply with the emission standards specified in 40 CFR 60 Subpart IIII and must operate and maintain the stationary compression ignition internal combustion engine and control device according to the manufacturer's written instructions.

40 CFR 63.6590 (a) (1)
This condition defines which reciprocating internal combustion engines (RICE) will be treated as an existing affected source. If the engine started up before December 19, 2002 then it will be considered an existing source for the purposes of this NESHAP rule.

40 CFR 63.6600 (b)
This condition lists the emission limits and operating limits that a new or reconstructed engine that is 2-stroke lean burn, 4-stroke lean burn, or compression ignition reciprocating internal combustion engine (RICE) must meet.

The engine must meet either the concentration listed for the specific type of engine listed in table 2a or reduce the amount of formaldehyde being emitted from the engine by the percentage listed.

If the engine is using non-selective catalytic reduction to reduce the emission of formaldehyde from the engine, then the facility must monitor the pressure drop and temperature of the catalyst bed and keep it within a certain range of what was measured during the performance test that the facility had to do to prove it was meeting the limits listed above for formaldehyde.

40 CFR 63.6600 (d)
This condition lists the emission limits and operating limits that existing non-emergency compression ignition engines with a site rating of more than 500 brake horsepower located at a major source of HAP emissions must meet.

The engine must meet either the concentration listed for the specific type of engine listed in table 2c or reduce the amount of carbon monoxide being emitted from the engine by the percentage listed.

If the engine is using an oxidation catalyst to reduce emissions from the engine, then the facility must monitor the pressure drop and temperature of the catalyst bed and keep it within a certain range of what was measured during the performance test that the facility had to do to prove it was meeting the limits listed above.

40 CFR Part 64
The federal Compliance Assurance Monitoring (CAM) rule, 40 CFR Part 64, requires monitoring of control device, capture system, and/or process parameters to provide a reasonable assurance of compliance with emission limitations or standards. It applies to emission units that use a control device to comply with certain standards and limitations and that have potential pre-control device emissions equal to or greater than a major source threshold.

Acid Rain program requirements; stratospheric ozone protection requirements; post-1990 New Source Performance Standards, Emission Guidelines, and National Emission Standards for Hazardous Air Pollutants; and some other limitations are exempt from CAM. However, many of the exempt requirements are subject to less stringent periodic monitoring under 40 CFR Part 70 and 6NYCRR Subpart 201-6.

6 NYCRR 211.1
This regulation requires that 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.

6 NYCRR 212-1.5 (g)
Requires facility owner/operator to operate and maintain all process emission sources, including the associated air pollution control equipment, in a manner consistent with safety, good air pollution control practices, good engineering practices and manufacturers' recommendations for minimizing emissions.

6 NYCRR 212-1.6 (a)
Owner or operator of any process emission source or emission point shall not cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater, except for the emissions of uncombined water.

6 NYCRR 212-2.3 (a)
The facility owner or operator shall not allow emissions of an air contminant to violate the requirements specified in Table 3 which specifies the degree of air cleaning required for criteria contaminants for which there is an National Ambient Air Quality Standard and for which there is an environmental rating assigned to the contmainant by the

Department.

6 NYCRR 212-2.3 (b)
The facility owner or operator shall not allow emissions of an air contminant to violate the requirements specified in Table 4 which specifies the degree of air cleaning required for non-criteria contaminants for which there is an environmental rating assigned to the contmainant by the Department.

6 NYCRR 212-2.4 (b)
For proces sources after July 1, 1973, particulate emissions shall not exceed 0.05 grains per cubic foot of exhaust gas expressed at standard conditions on a dry gas basis.

6 NYCRR 212-2.5 (b)
Establishes permissible particulate emission rate based on process weight for ferro alloy production facilities.

6 NYCRR 212-3.1 (c) (3)
An updated NOx RACT plan is submitted with this permit renewal to assess technically feasible control strategies to minimize NOx formation and emission control equipment alternatives. This process specific RACT demonstration had been submitted to the USEPA as a revision to the State Implementation Plan.

6 NYCRR 225-1.4 (a)
This citation regulates fuel mixtures and equivalent emission rate variances.

6 NYCRR Part 211
This regulation specifies general prohibitions regarding air pollution, visible emissions and the use of VOC's in liquefying asphalt used for paving purposes.

Compliance Certification

Summary of monitoring activities at GLOBE METALLURGICAL INC:

Location Facility/EU/EP/Process/ES	Cond No.	Type of Monitoring
1-WDCHP	31	intermittent emission testing
1-WDCHP	32	work practice involving specific operations
1-WDCHP	33	work practice involving specific operations
1-WDCHP	34	work practice involving specific operations
1-WDCHP	35	record keeping/maintenance procedures
1-WDCHP	37	intermittent emission testing
1-WDCHP	38	intermittent emission testing
1-WDCHP	39	monitoring of process or control device parameters as surrogate
E-AFURN	42	monitoring of process or control device parameters as surrogate
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
FACILITY	7	record keeping/maintenance procedures
1-WDCHP	30	monitoring of process or control device parameters as surrogate
E-AFURN/-/P01	43	monitoring of process or control device parameters as surrogate
R-DWYPK	49	monitoring of process or control device parameters as surrogate
E-AFURN	54	monitoring of process or control device parameters as surrogate
E-AFURN/-/TAP	45	record keeping/maintenance procedures
E-AFURN/-/TAP	46	monitoring of process or control device parameters as surrogate
FACILITY	25	intermittent emission testing
1-RFMON/-/VNT	29	record keeping/maintenance procedures
1-RFMON/-/VNT	53	record keeping/maintenance procedures
P-ROFIN	47	monitoring of process or control device parameters as surrogate
P-ROFIN	48	monitoring of process or control device parameters as surrogate
E-AFURN	40	monitoring of process or control device parameters as surrogate
E-AFURN	41	monitoring of process or control device parameters as surrogate
E-AFURN/-/P02	44	monitoring of process or control device parameters as surrogate
FACILITY	26	monitoring of process or control device parameters as surrogate

Basis for Monitoring

6NYCRR, Part 212-2.5(a) and (b):

The two electric arc furnaces are subject to the process weight emission limits for ferroalloy furnaces as determined by Table 5 of 6NYCRR, Part 212-2.5(a). Permissible emissions are calculated using the formula shown in Table 6 of 212-2.5(b) 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. Compliance will be demonstrated by the tracking of raw material additions over a 24 hour period.

Inspection of the baghouses for the #9 and #11 furnaces will be conducted on a daily basis. Each furnace collector has a dedicated computer system which allows personnel to evaluate baghouse and dust handling operating parameters and initiate preventative maintenance, diagnostic, and corrective maintenance programs. In addition to daily computer alarms and diagnostic checks, additional maintenance activities are performed at weekly and monthly intervals. The remaining collectors are inspected by outside contractors on a quarterly basis.

6NYCRR, Part 212-3:
The furnaces each having hourly nitrogen oxide emissions of 87.6 pounds are also subject to the NOx Reasonably Available Control Technology (RACT) compliance requirements of 6NYCRR, Part 212-3. A NOx RACT analysis was submitted with the initial Title V permit and reviewed by this Department and the USEPA. It was determined that there are no feasible control technologies available. Therefore, RACT as no control is incorporated into this permit limiting NOx emissions to 87.6 pounds per hour per furnace and a combined 767.3 tons per year of NOx. 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 submitted to the USEPA as a source specific SIP revision.

6NYCRR,Part 212-4(b):
Particulate emissions from the baghouses associated with crushing and grinding and material handling, emission points EP06A and EP007are limited to .05 gr/dscf.

6NYCRR, Part 225-1.5(b):
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(d) Table 2. 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 Nox per pound of material produced. Therefore, pursuant to 225-1.5(b) an equivalent emission rate will allow 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 of 3.4 pounds per million Btu heat input maximum and 2.8 pounds per million Btu average. Coal and coke will be combined in a ratio of a minimum 4:1 to ensure compliance with the limit. Calculations based on fuel sampling are required to demonstrate compliance with the Sulfur dioxide limit.