

Facility DEC ID: 4421500054

PERMIT
Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Air State Facility
Permit ID: 4-4215-00054/00189
Mod 0 Effective Date: 06/05/2018 Expiration Date: 06/04/2028
Mod 1 Effective Date: 07/23/2019 Expiration Date: 06/04/2028
Mod 2 Effective Date: 07/02/2020 Expiration Date: 06/04/2028

Permit Issued To: GENERAL ELECTRIC COMPANY
33-41 Farnsworth St
Boston, MA 02210

Contact: Stan Genega
GE Steam Turbine Generator Global
1 River Rd
Schenectady, NY 12345
(518) 385-6991

Facility: GENERAL ELECTRIC STEAM TURBINE GENERATOR GLOBAL
1 RIVER RD
SCHENECTADY, NY 12345

Contact: Maggie Campbell
GE Steam Turbine Generator Global
1 River Rd
Schenectady, NY 12345
(518) 419-4570

Description:
test

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: NANCY M BAKER
NYSDEC - REGION 4
1130 N WESTCOTT RD
SCHENECTADY, NY 12306-2014

Authorized Signature: _____ Date: ____ / ____ / ____

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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.

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Facility Level

- 5 5 Submission of application for permit modification or renewal-REGION 4 HEADQUARTERS

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

Condition 1: Facility Inspection by the Department
Applicable State Requirement: ECL 19-0305

Item 1.1:

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

Item 1.2:

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

Item 1.3:

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

Condition 2: Relationship of this Permit to Other Department Orders and Determinations
Applicable State Requirement: ECL 3-0301 (2) (m)

Item 2.1:

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

Condition 3: Applications for permit renewals, modifications and transfers
Applicable State Requirement: 6 NYCRR 621.11

Item 3.1:

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

Item 3.2:

The permittee must submit a renewal application at least 180 days before the expiration of permits for 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.

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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 4 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 4 Headquarters
Division of Environmental Permits
1130 North Westcott Rd.
Schenectady, NY 12306-2014
(518) 357-2069

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Permit Under the Environmental Conservation Law (ECL)

ARTICLE 19: AIR POLLUTION CONTROL - AIR STATE FACILITY PERMIT

IDENTIFICATION INFORMATION

Permit Issued To: GENERAL ELECTRIC COMPANY
33-41 Farnsworth St
Boston, MA 02210

Facility: GENERAL ELECTRIC STEAM TURBINE GENERATOR GLOBAL
1 RIVER RD
SCHENECTADY, NY 12345

Authorized Activity By Standard Industrial Classification Code:
3511 - TURBINES AND TURBINE GENERATOR

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NOTE: * preceding the condition number indicates capping.

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FEDERALLY ENFORCEABLE CONDITIONS

Mod 2/FINAL

**** Facility Level ****

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

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

Item A: Sealing - 6 NYCRR 200.5

The Commissioner may seal an air contamination source to prevent its operation if compliance with 6 NYCRR Chapter III is not met within the time provided by an order of the Commissioner issued in the case of the violation. Sealing means labeling or tagging a source to notify any person that operation of the source is prohibited, and also includes physical means of preventing the operation of an air contamination source without resulting in destruction of any equipment associated with such source, and includes, but is not limited to, bolting, chaining or wiring shut control panels, apertures or conduits associated with such source.

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

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

Item B: Acceptable Ambient Air Quality - 6 NYCRR 200.6

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

Item C: Maintenance of Equipment - 6 NYCRR 200.7

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

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required to operate such device effectively.

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

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

(a) The owner and/or operator must apply for a permit for such emission source or register the facility in accordance with the provisions of Part 201.

(b) The emission source or facility is subject to all regulations that were applicable to it at the time of construction or modification and any subsequent requirements applicable to existing sources or facilities.

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

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

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

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

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

The owner and/or operator of an emission source or unit that is eligible to be exempt, may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request.

Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

Item H: Proof of Eligibility for Sources Defined as Trivial

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Activities - 6 NYCRR 201-3.3 (a)

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

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

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

Item J: Open Fires Prohibitions - 6 NYCRR 215.2

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

Item K: 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 L: Federally Enforceable Requirements - 40 CFR 70.6 (b)

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All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

FEDERAL APPLICABLE REQUIREMENTS
The following conditions are federally enforceable.

Condition 1-1: Maintenance of Equipment
Effective between the dates of 07/23/2019 and 06/04/2028

Applicable Federal Requirement:6 NYCRR 200.7

Item 1-1.1:

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

Condition 1-2: Non Applicable requirements
Effective between the dates of 07/23/2019 and 06/04/2028

Applicable Federal Requirement:6 NYCRR 201-6.4 (g)

Item 1-2.1:

This section contains a summary of those requirements that have been specifically identified as being not applicable to this facility and/or emission units, emission points, processes and/or emission sources within this facility. The summary also includes a justification for classifying any such requirements as non-applicable.

(From Mod 1) 40 CFR Part 63, Subpart WWWW
Emission Unit: 100SCC Process: 300
Reason: Processes 300, 301, and 302 are metal etching processes. These processes are not an electrolytic process and do not meet the definition of any of the processes that are included in the definition of plating and polishing facility. Therefore, Subpart WWWW does not apply

Condition 1-3: Facility Permissible Emissions
Effective between the dates of 07/23/2019 and 06/04/2028

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Applicable Federal Requirement:6 NYCRR 201-7.1

Item 2-3.1:

The sum of emissions from the emission units specified in this permit shall not equal or exceed the following

Potential To Emit (PTE) rate for each regulated contaminant:

per year	CAS No: 007647-01-0 (From Mod 2)	PTE: 18,000 pounds
	Name: HYDROGEN CHLORIDE	
per year	CAS No: 0NY100-00-0 (From Mod 2)	PTE: 48,000 pounds
	Name: TOTAL HAP	

Condition 2-1: Capping Monitoring Condition
Effective between the dates of 07/02/2020 and 06/04/2028

Applicable Federal Requirement:6 NYCRR 201-7.1

Item 2-1.1:

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

- 40 CFR Part 63, Subpart DDDDD
- 40 CFR Part 63, Subpart MMMM

Item 2-1.2:

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

Item 2-1.3:

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

Item 2-1.4:

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

Item 2-1.5:

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

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201 and of the Act.

Item 2-1.6:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY100-00-0 TOTAL HAP

Item 2-1.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

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

Monitoring Description:

Records shall be maintained that indicate facility emissions from point and fugitive sources of hazardous air pollutants (HAPs). Individual HAP emissions from sources at the facility shall not exceed 18,000 pounds during any 12 consecutive months. Total HAP emissions from sources at the facility shall not exceed 48,000 pounds during any 12 consecutive months. Total HAP emissions from sources at the facility shall not exceed 48,000 pounds during any 12 consecutive months. All required records shall be maintained on-site at the facility in a manual log format or acquisition/calculation system for at least five years and shall remain available for inspection by the Department, upon request.

All HAP on site shall be included in the facility's HAP emission records. Furthermore, these HAPs shall be subject to the individual HAP limit (18,000 pounds/consecutive 12-month period) and shall be included in the total HAP limit (48,000 pounds/consecutive 12 month period).

The facility shall calculate HAP emissions using purchase, usage, and/or production records. Where purchase records are used, it shall be assumed that what is purchased for a period is emitted during that period. Process knowledge and control device efficiencies shall also be used to determine emissions.

When using 'purchase records', the total pounds of a chemical product that is purchased (calculated using the volume of material purchased and the density of the product or other weight/volume measurement as determined by the chemical product manufacturer) shall be multiplied by an emission factor for individual HAP contained in the chemical product to determine emitted HAP for the purchase period.

When using 'usage records', the actual use of a chemical

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product in a volume measurement or other use quantity (for example: rolls of tape), as indicated on usage log sheets, shall be multiplied by an emission factor for individual HAP contained in the chemical product to determine emitted HAP for the use period. The emission factor shall be determined by multiplying the density if the material or other weight/unit measurement (for example: lb/roll of tape) and the weight percentage of individual HAP contained in the chemical product.

When using ‘production records’, a production measurement (for example: inches of punchings) shall be multiplied by a usage factor (for example: gallons coating/ inch of punchings). The volume of usage shall be multiplied by an emission factor for individual HAP contained in the chemical product to determine emitted HAP for the use period. The emission factor shall be determined by multiplying the density of the material or other weight/unit measurement and the weight percentage of individual HAP contained in the chemical product.

Weight percentage and product density, or weight/ unit measurement shall be obtained from the safety data sheets (SDSs) or other data source provided by the chemical product manufacturer.

Within 30 days of the close of each month, the facility shall calculate rolling 12-month HAP emissions for the period ending in the previous month. For each month that the rolling 12-month HAP emissions are 80% or more of the individual or total HAP limit, written notification shall be provided to the RAPCE at the Region 4 RAPCE address specified elsewhere in this permit. The notification shall identify the rolling 12-month HAP emissions and the percentage of the HAP limit which the emissions represent.

Compliance with this condition shall indicate the facility is not a major source of HAPs, per the definition of “major stationary source or major source” contained in 6NYCRR 201-2.1(b), both for individual HAPs and total HAPs.”

Parameter Monitored: TOTAL HAP
Upper Permit Limit: 48000 pounds per year
Monitoring Frequency: MONTHLY
Averaging Method: ANNUAL MAXIMUM ROLLED MONTHLY
Reporting Requirements: SEMI-ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2021.
Subsequent reports are due every 6 calendar month(s).

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Condition 2-2: Capping Monitoring Condition
Effective between the dates of 07/02/2020 and 06/04/2028

Applicable Federal Requirement: 6 NYCRR 201-7.1

Replaces Condition(s) 1-4

Item 2-2.1:

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

6 NYCRR Subpart 201-6

Item 2-2.2:

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

Item 2-2.3:

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

Item 2-2.4:

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

Item 2-2.5:

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

Item 2-2.6:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 007647-01-0 HYDROGEN CHLORIDE

Item 2-2.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

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

Monitoring Description:

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The Future Etch 2.0 process will be vented to an acid gas scrubber to reduce emissions of HCl. To maintain facility-wide HCl emissions below 18,000 lb/yr, acid gas scrubber parameters will be continuously monitored and recorded whenever the associated process equipment is operating, except during quality assurance and routine maintenance activities.

Parameters to be monitored will be established upon completion of system design and will be maintained within manufacturer's recommendations. If stack testing is conducted, operating parameters will be maintained within values established during the stack test.

Parameter Monitored: HYDROGEN CHLORIDE

Upper Permit Limit: 18000 pounds per year

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: ANNUAL MAXIMUM ROLLED MONTHLY

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2021.

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

Condition 17: Visible Emissions Limited
Effective between the dates of 06/05/2018 and 06/04/2028

Applicable Federal Requirement: 6 NYCRR 211.2

Item 17.1:

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

Condition 1-5: Compliance Demonstration
Effective between the dates of 07/23/2019 and 06/04/2028

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

Replaces Condition(s) 2

Item 1-5.1:

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

Emission Unit: 1-00SCC
Process: 050

Emission Unit: 1-00SCC
Process: 190

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Emission Unit: 1-00SCC
 Process: 210

Emission Unit: 1-00SCC
 Process: 240

Item 1-5.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

No person shall cause or allow emissions having an average opacity during any six consecutive minutes of 20% or greater from any process emission source, except only the emission of uncombined water. The Department reserves the right to perform or require the performance of a Method 9 opacity evaluation at any time during facility operation.

The permittee will conduct observations of visible emissions from the emission unit , process, etc. to which this condition applies at the monitoring frequency stated below while the process is in operation .

The permittee will immediately investigate any instance where there is cause to believe that visible emission above those that are normal and in compliance are occurring or have occurred from a process source.

If visible emissions above those that are normal (this may be zero percent opacity for many or all emission sources) and in compliance with section 212.6(a) are detected, the permittee shall determine the cause, make the necessary correction, and verify that the excess visible emission problem has been corrected.

If visible emissions above those that are normal and in compliance continue to be present after corrections are made, the permittee will immediately notify the Department and conduct a Method 9 assessment within 24 hours to determine the degree of opacity.

Records of these observations, investigations and corrective actions will be kept on-site in a format acceptable to the Department and the semiannual progress report and annual compliance certifications requires of all permittees subject to Title V must include a summary of these instances.

Work Practice Type: PARAMETER OF PROCESS MATERIAL

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Process Material: RAW MATERIAL
 Parameter Monitored: OPACITY
 Upper Permit Limit: 20 percent
 Monitoring Frequency: WEEKLY
 Averaging Method: 6-MINUTE AVERAGE (METHOD 9)
 Reporting Requirements: SEMI-ANNUALLY (CALENDAR)
 Reports due 30 days after the reporting period.
 The initial report is due 1/30/2020.
 Subsequent reports are due every 6 calendar month(s).

Condition 5: Sale of waste fuel prohibitions.
Effective between the dates of 06/05/2018 and 06/04/2028

Applicable Federal Requirement:6 NYCRR 225-2.6 (c)

Item 5.1: No person may sell, offer for sale, deliver or exchange in trade any waste fuel except to a facility meeting the applicable requirements of this Subpart and the regulations promulgated pursuant to article 27, titles 7 and 9 and article 23, title 23 of ECL or to a transporter of waste fuel who is permitted under 6 NYCRR Part 364.

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

Condition 9: Compliance Demonstration
Effective between the dates of 06/05/2018 and 06/04/2028

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

Item 9.1:
 The Compliance Demonstration activity will be performed for:

Emission Unit: 1-00SCC

Item 9.2:
 Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Emissions of solid particulates are limited to less than 0.50 grains of particulates per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis. Compliance testing will be conducted by the facility at the request of the Department.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 10: Compliance Demonstration
Effective between the dates of 06/05/2018 and 06/04/2028

Permit ID: 4-4215-00054/00189

Facility DEC ID: 4421500054

Applicable Federal Requirement:6 NYCRR 227-2.4 (d)

Item 10.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-00SCC

Regulated Contaminant(s):

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

Item 10.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The owner or operator of a small boiler, small combustion turbine, or small internal combustion engine must perform an annual tune-up of their equipment. This tune-up should be performed in accordance with the requirements of the DAR-5 guidance document. Records of each tune-up must be kept on-site for a minimum of five years.

Monitoring Frequency: ANNUALLY

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2019.

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

Condition 2-3: Compliance Demonstration

Effective between the dates of 07/02/2020 and 06/04/2028

Applicable Federal Requirement:6 NYCRR 200.7

Replaces Condition(s) 1-6

Item 2-3.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-00SCC

Process: 190

Item 2-3.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Emission sources and controls shall be operated and maintained according to good engineering practice. Inspections of the particulate filtration system shall be performed once per calendar quarter. Filters must be changed on a regular basis and be maintained to ensure compliance.

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Documentation shall be maintained by keeping records as appropriate to demonstrate compliance. Records shall include detailing the results of the inspections, routine maintenance activities, malfunctions, and any repairs and/or corrective actions taken.

Records shall be in a format acceptable to the Department, shall include pertinent supporting data and calculations, as necessary, shall be retained at the facility for five years after the date of the last entry, and upon request, shall be made available to the Department for review.

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 1/30/2021.

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

Condition 2-4: Compliance Demonstration
Effective between the dates of 07/02/2020 and 06/04/2028

Applicable Federal Requirement: 6 NYCRR 200.7

Replaces Condition(s) 1-7

Item 2-4.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-00SCC

Process: 210

Item 2-4.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Emission sources and controls shall be operated and maintained according to good engineering practice. Inspections of the particulate filtration system shall be performed once per calendar quarter. Filters must be changed on a regular basis and be maintained to ensure compliance.

Documentation shall be maintained by keeping records as appropriate to demonstrate compliance. Records shall include detailing the results of the inspections, routine maintenance activities, malfunctions, and any repairs and/or corrective actions taken.

Records shall be in a format acceptable to the Department, shall include pertinent supporting data and calculations, as necessary, shall be retained at the facility for five

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years after the date of the last entry, and upon request, shall be made available to the Department for review.

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 1/30/2021.

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

Condition 1-8: Capping Monitoring Condition
Effective between the dates of 07/23/2019 and 06/04/2028

Applicable Federal Requirement:6 NYCRR 201-7.1

Item 1-8.1:

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

6 NYCRR Subpart 201-6

Item 1-8.2:

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

Item 1-8.3:

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

Item 1-8.4:

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

Item 1-8.5:

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

Item 1-8.6:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-00SCC

Process: 300

Permit ID: 4-4215-00054/00189

Facility DEC ID: 4421500054

Regulated Contaminant(s):
 CAS No: 007647-01-0 HYDROGEN CHLORIDE

Item 1-8.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

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

Monitoring Description:

To maintain facility-wide emissions of hydrochloric acid (HCl) below the major source threshold, a maximum of 3,060 parts will be etched in the current etch process per 12-month rolling period. This is based on processing 12 parts over the course of 255 16-hour days, with an estimated HCl hourly emission rate of 1.80 lb/hr and estimated annual HCl emissions of 7,344 lb/yr. Daily, monthly, and rolling 12-month records of the number of parts etched, and resulting estimated rolling 12-month HCl emissions, will be maintained to document compliance with this limit.

Parameter Monitored: HYDROGEN CHLORIDE

Upper Permit Limit: 7344 pounds per year

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING
 DESCRIPTION

Averaging Method: ANNUAL MAXIMUM ROLLED MONTHLY

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2020.

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

Condition 1-9: Capping Monitoring Condition
Effective between the dates of 07/23/2019 and 06/04/2028

Applicable Federal Requirement:6 NYCRR 201-7.1

Item 1-9.1:

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

6 NYCRR Subpart 201-6

Item 1-9.2:

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

Item 1-9.3:

The owner or operator of the permitted facility must maintain all required records on-site for a

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period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 1-9.4:

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

Item 1-9.5:

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

Item 1-9.6:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-00SCC
Process: 301

Regulated Contaminant(s):
CAS No: 007647-01-0 HYDROGEN CHLORIDE

Item 1-9.7:

Compliance Demonstration shall include the following monitoring:

Capping: Yes

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

Monitoring Description:

To maintain facility-wide emissions of hydrochloric acid (HCl) below the major source threshold, a maximum of 3,060 parts will be etched in the current etch process per 12-month rolling period. This is based on processing 12 parts over the course of 255 16-hour days, with an estimated HCl hourly emission rate of 3.00 lb/hr and estimated annual HCl emissions of 12,240 lb/yr. Daily, monthly, and rolling 12-month records of the number of parts etched, and resulting estimated rolling 12-month HCl emissions, will be maintained to document compliance with this limit.

Parameter Monitored: HYDROGEN CHLORIDE

Upper Permit Limit: 12240 pounds per year

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING
DESCRIPTION

Averaging Method: ANNUAL MAXIMUM ROLLED MONTHLY

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

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Reports due 30 days after the reporting period.
The initial report is due 1/30/2020.
Subsequent reports are due every 6 calendar month(s).

Condition 2-5: Compliance Demonstration
Effective between the dates of 07/02/2020 and 06/04/2028

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

Item 2-5.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-00SCC Emission Point: 24101
Process: 241

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

Item 2-5.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Emission sources and controls shall be operated and maintained according to good engineering practice. Inspections of particulate filtration system shall be performed once per calendar quarter. Filters must be changed on a regular basis and be maintained to ensure compliance. Documentation shall be maintained by keeping records as appropriate to demonstrate compliance. Records shall include detailing the results of the inspections, routine maintenance activities, malfunctions, and any repairs and/or corrective actions taken. Records shall be in a format acceptable to the Department, shall include pertinent supporting data and calculations, as necessary, shall be retained at the facility for five years after the date of the last entry, and upon request, shall be made available to the Department for review.

Upper Permit Limit: 0.050 grains per cubic foot
Reference Test Method: See monitoring Description
Monitoring Frequency: QUARTERLY
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 1/30/2021.
Subsequent reports are due every 6 calendar month(s).

Permit ID: 4-4215-00054/00189

Facility DEC ID: 4421500054

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: 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 Facilities With State Facility Permits - 6 NYCRR 201-1.10 (a)

Where facility owners and/or operators keep records pursuant to compliance with the requirements of 6 NYCRR Subpart 201-5.4, and/or the emission capping requirements of 6 NYCRR Subpart 201-7, the Department will make such records available to the public upon request in accordance with 6 NYCRR Part 616 - Public Access to Records.

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Facility owners and/or operators must submit the records required to comply with the request within sixty working days of written notification by the Department.

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

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

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

STATE ONLY APPLICABLE REQUIREMENTS

The following conditions are state only enforceable.

Condition 12: Contaminant List

Effective between the dates of 06/05/2018 and 06/04/2028

Applicable State Requirement:ECL 19-0301

Item 12.1:

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

CAS No: 000071-43-2
Name: BENZENE

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

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

CAS No: 0NY100-00-0

Permit ID: 4-4215-00054/00189

Facility DEC ID: 4421500054

Name: TOTAL HAP

CAS No: 0NY210-00-0

Name: OXIDES OF NITROGEN

Condition 13: Malfunctions and start-up/shutdown activities
Effective between the dates of 06/05/2018 and 06/04/2028**Applicable State Requirement:6 NYCRR 201-1.4****Item 13.1:**

(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 14: Emission Unit Definition
Effective between the dates of 06/05/2018 and 06/04/2028**Applicable State Requirement:6 NYCRR Subpart 201-5**

Permit ID: 4-4215-00054/00189

Facility DEC ID: 4421500054

Item 14.1(From Mod 2):

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

Emission Unit: 1-00SCC

Emission Unit Description:

This emission unit is comprised of processes associated with the Schenectady Cores and Castings (SCC) operation in Building 66 and Building 66 Annex. The SCC operation involves making cores that are then used in a metal casting process to produce turbine blades.

Building(s): 66
66 Annex

Condition 15: Renewal deadlines for state facility permits
Effective between the dates of 06/05/2018 and 06/04/2028

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

Item 15.1:

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

Condition 2-6: Compliance Demonstration
Effective between the dates of 07/02/2020 and 06/04/2028

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

Item 2-6.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 2-6.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

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

Division of Air Resources
NYS Dept. of Environmental Conservation
Region 4
1130 N. Westcott Rd.
Schenectady, NY 12306

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 16: Compliance Demonstration
Effective between the dates of 06/05/2018 and 06/04/2028

Permit ID: 4-4215-00054/00189

Facility DEC ID: 4421500054

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

Item 16.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 16.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

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

Division of Air Resources
NYS Dept. of Environmental Conservation
Region 4
1130 N. Westcott Rd.
Schenectady, NY 12306

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 7/30/2018.

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

Condition 1: Air pollution prohibited
Effective between the dates of 06/05/2018 and 06/04/2028

Applicable State Requirement:6 NYCRR 211.1

Item 1.1:

No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.

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

Condition 18: Emission Point Definition By Emission Unit
Effective between the dates of 06/05/2018 and 06/04/2028

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 18.1(From Mod 2):

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

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Facility DEC ID: 4421500054

Emission Unit: 1-00SCC			
Emission Point: 01001	Height (ft.): 66	Diameter (in.): 30	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 01002	Height (ft.): 66	Diameter (in.): 30	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 02001	Height (ft.): 67	Diameter (in.): 2	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 05001	Height (ft.): 67	Diameter (in.): 16	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 08201	Height (ft.): 76	Diameter (in.): 12	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 08202	Height (ft.): 76	Diameter (in.): 12	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 09201	Height (ft.): 79	Diameter (in.): 48	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 19001	Height (ft.): 66	Diameter (in.): 26	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 21001	Height (ft.): 66	Diameter (in.): 26	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 22101	Height (ft.): 66	Diameter (in.): 14	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 22102	Height (ft.): 68	Diameter (in.): 18	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 22301	Height (ft.): 78	Diameter (in.): 34	
	NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 24002			

Permit ID: 4-4215-00054/00189

Facility DEC ID: 4421500054

Height (ft.): 67	Diameter (in.): 4	
NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 24101		
Height (ft.): 16	Length (in.): 16	Width (in.): 16
NYTMN (km.): 4739.611	NYTME (km.): 584.94	
Emission Point: 30002		
Height (ft.): 43	Diameter (in.): 14	
NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66
Emission Point: 30003		
Height (ft.): 18	Diameter (in.): 16	
NYTMN (km.): 4739.67	NYTME (km.): 584.89	Building: 66 Annex
Emission Point: 30004		
Height (ft.): 38	Diameter (in.): 14	
NYTMN (km.): 4739.67	NYTME (km.): 584.89	Building: 66 Annex
Emission Point: 26003		
Height (ft.): 6	Diameter (in.): 6	
NYTMN (km.): 4740.34	NYTME (km.): 584.872	Building: 66 Annex

Condition 19: Process Definition By Emission Unit
Effective between the dates of 06/05/2018 and 06/04/2028

Applicable State Requirement: 6 NYCRR Subpart 201-5

Item 19.1(From Mod 2):

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

Emission Unit: 1-00SCC
 Process: 010 Source Classification Code: 3-99-999-92
 Process Description:
 Forming - Parts are formed and contain chemicals that are partially solidified through a curing process. Emissions are exhausted via two room exhausts.

Emission Source/Control: 01001 - Process

Emission Source/Control: 01002 - Process

Emission Source/Control: 01003 - Process

Emission Source/Control: 01004 - Process

Emission Source/Control: 01005 - Process

Emission Source/Control: 01006 - Process

Emission Source/Control: 01007 - Process

Permit ID: 4-4215-00054/00189

Facility DEC ID: 4421500054

Emission Source/Control: 01008 - Process

Emission Source/Control: 01009 - Process

Emission Source/Control: 01010 - Process

Emission Source/Control: 01011 - Process

Item 19.2(From Mod 2):

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

Emission Unit: 1-00SCC

Process: 020

Source Classification Code: 3-99-999-92

Process Description:

Part cleaning - Parts are cleaned with equipment that uses a closed-loop distillation unit.

Emission Source/Control: 02001 - Process

Item 19.3(From Mod 2):

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

Emission Unit: 1-00SCC

Process: 050

Source Classification Code: 3-99-999-92

Process Description:

Formulation prep - Silica and other raw materials are blended to make a formulation. Potential particulate matter sources vent to a dust collector.

Emission Source/Control: 050DC - Control

Control Type: FABRIC FILTER

Emission Source/Control: 05001 - Process

Emission Source/Control: 05002 - Process

Item 19.4(From Mod 2):

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

Emission Unit: 1-00SCC

Process: 082

Source Classification Code: 3-99-999-92

Process Description:

Debind - Parts are fired and chemicals burned off using electric ovens equipped with natural gas-fired afterburners.

Emission Source/Control: 82AB1 - Control

Control Type: DIRECT FLAME AFTERBURNER

Emission Source/Control: 82AB2 - Control

Control Type: DIRECT FLAME AFTERBURNER

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Facility DEC ID: 4421500054

Emission Source/Control: 08201 - Process

Emission Source/Control: 08202 - Process

Item 19.5(From Mod 2):

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

Emission Unit: 1-00SCC

Process: 092

Source Classification Code: 1-02-006-02

Process Description:

High/ Final Fire - Cores heat treated in a natural gas-fired kiln with a maximum heat input capacity of 19.7 MMBtu/hr (including afterburner). Kiln emissions are vented to a natural gas-fired afterburner. The only emissions are byproducts of combustion.

Emission Source/Control: 09201 - Combustion

Emission Source/Control: 092AB - Control

Control Type: DIRECT FLAME AFTERBURNER

Item 19.6(From Mod 2):

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

Emission Unit: 1-00SCC

Process: 190

Source Classification Code: 3-99-999-92

Process Description:

Development Shell - Robotic equipment is used to build a shell around a wax mold using silica formulation and powder additives. Potential sources of particulate matter emissions (i.e., pre-mix tanks and sanders) are vented to a dedicated dust collector.

Emission Source/Control: 190DC - Control

Control Type: FABRIC FILTER

Emission Source/Control: 19001 - Process

Emission Source/Control: 19002 - Process

Emission Source/Control: 19003 - Process

Emission Source/Control: 19004 - Process

Emission Source/Control: 19005 - Process

Emission Source/Control: 19006 - Process

Item 19.7(From Mod 2):

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

Emission Unit: 1-00SCC

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Process: 210 Source Classification Code: 3-99-999-92

Process Description:

Large Shell - Robotic equipment is used to build a shell around a wax mold using silica formulation and powder additives. Potential sources of particulate matter emissions (I.e premix tanks and sanders) are vented to a dedicated dust collector.

Emission Source/Control: 210DC - Control
Control Type: FABRIC FILTER

Emission Source/Control: 21001 - Process

Emission Source/Control: 21002 - Process

Emission Source/Control: 21003 - Process

Emission Source/Control: 21004 - Process

Emission Source/Control: 21005 - Process

Emission Source/Control: 21006 - Process

Emission Source/Control: 21007 - Process

Emission Source/Control: 21008 - Process

Emission Source/Control: 21009 - Process

Item 19.8(From Mod 2):

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

Emission Unit: 1-00SCC
Process: 221 Source Classification Code: 3-99-999-92

Process Description:

Dewax - Wax is removed using electric boilerclaves. Emissions are captured by an exhaust hood located above the boilerclave door and at the melted wax storage container.

Emission Source/Control: 22101 - Process

Emission Source/Control: 22102 - Process

Item 19.9(From Mod 2):

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

Emission Unit: 1-00SCC
Process: 223 Source Classification Code: 3-99-999-92

Process Description:

Wax Burnout - Treatment of the core in natural gas-fired furnace equipped with natural gas-fired afterburner.

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Facility DEC ID: 4421500054

Emission Source/Control: 223AB - Control
 Control Type: DIRECT FLAME AFTERBURNER

Emission Source/Control: 22301 - Process

Item 19.10(From Mod 2):

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

Emission Unit: 1-00SCC
 Process: 240 Source Classification Code: 3-99-999-92

Process Description:
 Casting with Equiax Furnaces - Nickel alloys are cast using electric Equiax (EQ) furnaces operating under vacuum. Furnaces are equipped with a water jacket, which causes metals that diffuse to condense on the walls and floor of the furnace. Parts are removed to a vented cooling station, where exothermic powders may be applied to control the cooling process.

Emission Source/Control: 24002 - Process

Item 19.11(From Mod 2):

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

Emission Unit: 1-00SCC
 Process: 241 Source Classification Code: 3-12-999-99

Process Description:
 Cutting ingots to smaller size for use in casting furnace. Cutting saw (source 24101) vents to HEPA filters (241HF) then to emission point 24101.

Emission Source/Control: 241HF - Control
 Control Type: HIGH EFFICIENCY PARTICULATE AIR FILTER

Emission Source/Control: 24101 - Process

Item 19.12(From Mod 2):

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

Emission Unit: 1-00SCC
 Process: 260 Source Classification Code: 3-99-999-92

Process Description:
 Leach Autoclave - Core is removed using pressurized autoclave units containing caustic solution. Autoclave is equipped with an electric heater. Venting of autoclaves occurs during depressurization and is routed to knock-out tank, which vents to atmosphere.

Emission Source/Control: 26008 - Process

Item 19.13(From Mod 2):

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Facility DEC ID: 4421500054

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

Emission Unit: 1-00SCC
 Process: 300 Source Classification Code: 3-99-999-92
 Process Description:
 Bench-top Etch - a bench-top concentrated acid bath (30008) and a dilute acid bath (30009) are used to etch the casting to expose grain structure. A hood captures vapors from the acid baths and vents to EP 30002.

Emission Source/Control: 30008 - Process

Emission Source/Control: 30009 - Process

Item 19.14(From Mod 2):

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

Emission Unit: 1-00SCC
 Process: 301 Source Classification Code: 3-99-999-92
 Process Description:
 Etch Process 1.5 - A concentrated acid bath (30101) and dilute acid bath (30102) will be used to etch the casting to expose grain structure. Vapors from the baths will be captured and routed to EP 30003.

Emission Source/Control: 30101 - Process

Emission Source/Control: 30102 - Process

Item 19.15(From Mod 2):

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

Emission Unit: 1-00SCC
 Process: 302 Source Classification Code: 3-99-999-92
 Process Description:
 Future Etch Process 2.0 - A concentrated acid bath (30201) and dilute acid bath (30202) will be used to etch the casting to expose grain structure. Vapors from the baths will be captured and routed to an acid gas scrubber (302AS), then to EP 30004.

Emission Source/Control: 302AS - Control
 Control Type: GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 30201 - Process

Emission Source/Control: 30202 - Process

Condition 2-7: General Provisions

Effective between the dates of 07/02/2020 and 06/04/2028

Applicable State Requirement:6 NYCRR Subpart 201-5

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Item 2-7.1:

This Condition applies to Emission Unit: 1-00SCC

Item 2-7.2:

This section of the permit contains terms and conditions that are not federally enforceable and are not required under the Act or under any of its applicable requirements. Terms and conditions so designated are not subject to the requirements of Section 201-6.4 of Part 201.

Item 2-7.3:

Any person who owns and/or operates emission sources subject to this permit shall operate and maintain all emission sources and required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate 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 control devices may be sufficient reason for the Department to revoke or deny a permit.

Item 2-7.4:

The owner or operator of the emission sources subject to this permit 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 during normal operating hours, for the purpose of determining compliance with this and any other state or federal air pollution control requirements, regulations or law.

Condition 2-8: Compliance Demonstration

Effective between the dates of 07/02/2020 and 06/04/2028

Applicable State Requirement: 6 NYCRR 212-2.1 (a)

Replaces Condition(s) 1-10

Item 2-8.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-00SCC

Process: 082

Regulated Contaminant(s):

CAS No: 000071-43-2 BENZENE

Item 2-8.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Facility-wide emissions of benzene have been estimated to exceed the HTAC mass emission limit in 6 NYCRR 212-2.2, Table 2. The estimated ERP for benzene (an A-rated constituent) from each Debind furnace is greater than 1 pound/hour and less than 10 pounds/hour. Therefore, Debind

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benzene emissions are subject to 99% control in accordance with 6 NYCRR 212-2.2, Table 4.

Each of the Debind furnaces is controlled by a thermal oxidizer that is estimated to achieve a removal efficiency of 99%. The afterburner operating temperature will be continuously monitored and recorded whenever the associated process equipment is operating, except during quality assurance and routine maintenance activities. The afterburner operating temperature will be maintained at or above the temperature established during a stack test, which will be conducted within 180 days after transitioning into manufacturing.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: 3-HOUR ROLLING AVERAGE

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2021.

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

Condition 2-9: Compliance Demonstration
Effective between the dates of 07/02/2020 and 06/04/2028

Applicable State Requirement: 6 NYCRR 212-2.1 (a)

Replaces Condition(s) 1-11

Item 2-9.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-00SCC

Process: 223

Item 2-9.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Facility-wide emissions of benzene have been estimated to exceed the HTAC mass emission limit in 6 NYCRR 212-2.2, Table 2. The estimated ERP for benzene (an A-rated constituent) from the Wax Burnout furnace is greater than 0.1 pound/hour and less than 1 pound/hour. Therefore, Wax Burnout benzene emissions are subject to 90% control in accordance with 6 NYCRR 212-2.2, Table 4.

The Wax Burnout furnace is controlled by a thermal oxidizer that is estimated to achieve a removal efficiency of greater than 90%. The afterburner operating temperature will be continuously monitored and recorded whenever the associated process equipment is operating, except during

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quality assurance and routine maintenance activities. The afterburner operating temperature will be maintained at or above the temperature established during a stack test, which will be conducted within 180 days after transitioning to manufacturing.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: 3-HOUR ROLLING AVERAGE

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2021.

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

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