

Facility DEC ID: 9291100381

PERMIT
Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Air State Facility
Permit ID: 9-2911-00381/00002
Mod 0 Effective Date: 11/05/2015 Expiration Date: 11/04/2025
Mod 1 Effective Date: 05/12/2016 Expiration Date: 11/04/2025
Mod 2 Effective Date: 08/13/2024 Expiration Date: 11/04/2025
Mod 3 Effective Date: 02/21/2020 Expiration Date: 11/04/2025

Permit Issued To: AMERICARB, INC.
6100 NIAGARA FALLS BLVD
NIAGARA FALLS, NY 14304

Contact: THOMAS SPATORICO
6100 NIAGARA FALLS BLVD
NIAGARA FALLS, NY 14304
(716) 418-3525

Facility: AMERICARB INC
6100 NIAGARA FALLS BLVD
Niagara Falls, NY 14304

Contact: Daniel Broodo
Americarb, Inc
6100 Niagara Falls Blvd
Niagara Falls, NY 14304

Description:

This permit action is a modification to Air State Facility Permit Renewal 1 respective of the following:

1. The installation of one (1) Nabertherm H3630 Electric Furnace. This furnace will be used to cure and carbonize carbon fiber materials. The exhaust from the oven will be ducted to thermal oxidizer THOX1 for destruction.
2. The installation of a fourth power pack used to supply electricity to the various induction furnaces at the facility.
3. The installation of a continuous carbonization process, emission unit 2-RAYON. The process will include a natural gas fired drier and two electrically heated continuous feed ovens. Exhaust from the ovens will be ducted to VCU03 for thermal oxidation.
4. Installation of a continuous feed heat treat oven in Building 241 to carbonize carbon paper.
5. Installation of an oven for drying of wet and resin impregnated products.

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6. Removal of finishing equipment and associated baghouse from the finishing building.
7. Removal of mixing equipment and dryers associated with rigid carbon fiberboard production, except for dryer EP404 that will remain.
8. Removal of ES FURN2 the 11-foot diameter natural gas fired furnace.

Americarb (formerly Ashland Advanced Materials) owns a facility located at 6100 Niagara Falls Boulevard, Niagara Falls, Niagara County, New York which currently operates pursuant to Air State Facility Permit ID 9-2911-00381/00002.

The permit allows operation of two processes (emission units) to carbonize and graphitize carbon materials. Emission Unit 1-RAYON involves the carbonizing of fabric materials via heat treating in a one-step batch process. This permit modification allows the installation of a separate emission unit (EU 2-RAYON) to carbonize fabric via a continuous process. Potential emissions of hydrocarbons from the new continuous process will be controlled via thermal oxidation by Vapor Combustion Unit (ES VCU03). The other production process that the current permit (EU 1-Fiber) allows is the production and graphitization of rigid carbon fiberboard (RCFB). This process consisted of mixing raw materials, forming the RCFB in molds, and subsequent heat treating of the RCFB in one of several electrical induction furnaces. As part of this permit modification, all the existing RCFB production equipment (e.g., mixing, molding, drying) will be removed, with the exception of one natural gas fired dryer (ES ES404, EP EP404).

The facility will retain the electric induction furnaces and the ability to heat treat fiberboard produced off-site and carbonized material from EU 1-RAYON and the new EU 2-RAYON. Emission Unit 1-FINIS, which included equipment for the sizing and shaping of carbon/graphite products, including the associated baghouse (EP 501), in finishing building #5, have all been removed. The shaping and sizing equipment in the main building (#4) along with the associated baghouse (EP 406) remain.

The first step in the new continuous fabric carbonization process (EU 2-RAYON) is to wash and dry the fabric in a continuous drying oven. The oven will be natural gas fired and will have a heat input rating of 3 MMBtu/hr (ES RYDRY). Then the fabric will be fed through a series of two electrically powered infrared continuous belt furnaces. Alternatively, the fabric could be processed through the first continuous feed furnace, and then graphitized in the existing induction furnaces. Little to no emissions occur during the graphitization process. Emissions of hydrocarbons in the two continuous feed belt furnaces will be controlled via thermal oxidation (ES VCU03) to reduce emissions to the atmosphere.

To maintain operational flexibility, the facility will retain the ability to process rayon fibers in the existing Sager furnace as described in the current Air State Facility Permit. The Sager furnaces will heat treat carbon paper as a batch process. In addition to the batch capability, this permit modification proposes installation of an electrically heated continuous feed furnace to carbonize carbon paper. The new continuous furnace (ES ABBOT) will be located in the Finishing building. Exhaust from ES ABBOT will be ducted to the same control device (ES VCU3) as the continuous fabric carbonization process. The raw material initially will be a resin impregnated carbon paper. The impregnated raw material will be stacked, laminated, and heat

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treated. The final modification planned for EU 1-RAYON is to add a 3 MMBtu/hr natural gas fired oven (ES PPREG) and a 1.6 MMBtu/hr natural gas fired oven (ES PPRG2). The ovens will allow the facility to apply resin to carbon paper and cure it. The permitted 11-foot diameter natural gas fired furnace (ES FURN2) that had been used for smaller batches of rayon fiber carbonization has been removed.

The facility is no longer producing RCFB. As such, all the fiberboard casting equipment has been removed, including an electric drying oven, and natural gas fired drying ovens EP402 and EP403. Drying oven ES ES404, EP EP404 is remaining for use in drying materials as needed prior to carbonization. However, the facility requires the ability to heat treat materials with phenolic resins and will continue to operate the 96", 52", 33", and 25" furnaces, the L&L Bake Oven and Nabertherm furnace as described in the current permit with potential emissions directed to THOX1. The facility also requires the ability to graphitize previously carbonized materials in the electric induction furnaces. These may be carbonized materials brought into the facility from outside customers or carbonized products from EU 1-RAYON or EU 2-RAYON. As indicated by previous stack testing results, there is minimal potential for emissions of hydrocarbons from graphitizing previously carbonized material. Exhaust from the 96", 52", 33", and 25" furnaces, the L&L Bake Oven and Nabertherm furnace furnaces will not be directed to THOX1 when heat treating previously carbonized materials. The permit includes tracking and recordkeeping requirements to ensure that when materials with phenolic resins are heat treated that the emissions are controlled by THOX1.

To supply and control electricity for the induction ovens, electrical power packs are used. The current permit indicates that three power packs are used. To improve operational flexibility, expand business and employment, this permit modification includes adding a fourth power pack. These power packs will be used with the following induction furnaces:

- Three (3) 96" furnaces
- One (1) 25" furnace
- One (1) 33" furnace
- Sixteen (16) 52" furnaces

The existing chlorine purification system, including the associated wet scrubber and venturi scrubber, will remain unchanged.

The regulatory requirements of NYS air toxics program are contained in 6 NYCRR Part 212. DEC Program Policy DAR-1 provides guidance on the procedures for completing an analysis respective of the emissions and impacts of criteria and non-criteria (air toxic) pollutants. At the request of NYSDEC, Americarb has completed an impact analysis with regards to potential emissions of phenol and chlorine (Cl) that follows the requirements of 6 NYCRR 212 and Policy DAR-1.

An updated Toxic Impact Assessment (TIA) was submitted with the Ren 1 Mod 2 application assumed the total capped phenol (HAP) was emitted from each control device all year, 19,000 lb/yr per EP - THOX1, THOX2 and VCU03. If each source operated every hour all year (8760 hr/yr) this would be 2.17 lb/hr, which is much larger than the 2010 emission tests for THOX1 (0.013 lb/hr) and THOX2 (0.040 lb/hr). Using

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2.17 lb/hr emission rate for each control device, the cumulative short-term concentration from AERSCREEN would be 5% of the SGC.

Using stack test results from 2010 for THOX1 and THOX2, and assuming the total capped phenol (19,000 lb/yr, HAP) was emitted from the new vapor combustion unit (VCU03), the cumulative short-term impacts are about 1.4% of the phenol SGC of 5800 ug/m3, and 38% of the AGC (20 ug/m3). The TIA used a conservative 2.17 lb/hr emission rate from each control device. This method calculates a cumulative impact of 129% of the AGC even though each individual source is below the AGC.

A stack test on the wet scrubber exhaust (EP 405) completed in 2015 indicated maximum Cl emissions of 0.003 lb/hr. Using the AERSCREEN results, this emission rate equates to 0.3% of the short-term guidance concentration (SGC) and 45% of the annual guidance concentration (AGC).

Based on the maximum emissions of phenol and Cl, the worst-case ambient air impacts of phenol and Cl are below their respective Short-term and Annual Guideline Concentrations (SGC, AGC).

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: MICHELLE R WOZNICK
NYSDEC - REGION 9
700 DELAWARE AVE
BUFFALO, NY 14209

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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- 7 2 Relationship of this Permit to Other Department Orders and Determinations
- 7 3 Applications for permit renewals, modifications and transfers
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Facility Level

- 8 5 Submission of application for permit modification or renewal-REGION 9 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 2-1: Applications for permit renewals, modifications and transfers
Applicable State Requirement: 6 NYCRR 621.11

Item 2-1.1:

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 2-1.2:

The permittee must submit a renewal application at least 180 days before the expiration of permits for Title V and State Facility Permits.

Item 2-1.3

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 5: Permit modifications, suspensions or revocations by the Department
Applicable State Requirement: 6 NYCRR 621.13

Item 5.1:

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 2-2: Submission of application for permit modification or renewal-REGION 9

HEADQUARTERS

Applicable State Requirement: 6 NYCRR 621.6 (a)

Replaces Condition(s) 6

Item 2-2.1:

Submission of applications for permit modification or renewal are to be submitted to:

NYSDEC Regional Permit Administrator
Region 9 Headquarters
Division of Environmental Permits
700 Delaware Ave.,
Buffalo, NY 14209
(716) 851-7130

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ARTICLE 19: AIR POLLUTION CONTROL - AIR STATE FACILITY PERMIT

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6100 NIAGARA FALLS BLVD
NIAGARA FALLS, NY 14304

Facility: AMERICARB INC
6100 NIAGARA FALLS BLVD
Niagara Falls, NY 14304

Authorized Activity By Standard Industrial Classification Code:
3624 - CARBON AND GRAPHITE PRODUCTS

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Mod 1 Permit Effective Date: 05/12/2016

Permit Expiration Date: 11/04/2025

Mod 3 Permit Effective Date: 02/21/2020

Permit Expiration Date: 11/04/2025

Mod 2 Permit Effective Date: 08/13/2024

Permit Expiration Date: 11/04/2025

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- 9 *2-2 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- 11 *2-3 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- 13 2-4 6 NYCRR 211.2: Visible Emissions Limited
- 13 6 6 NYCRR 212-1.5 (a): Two or more process emission sources may be simultaneously emitted to the outdoor atmosphere through a single emission point
- 14 2-5 6 NYCRR 212-1.6 (a): Compliance Demonstration
- 14 2-6 6 NYCRR 212-2.4 (b): Compliance Demonstration
- 16 2-7 6 NYCRR 212-2.4 (b): Compliance Demonstration

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- 17 2-8 6 NYCRR 212-1.7 (a): Compliance Demonstration
- 19 2-9 6 NYCRR 212-2.1 (b): Compliance Demonstration

EU=1-FIBER,Proc=FB4

- 20 2-10 6 NYCRR 212-2.1 (b): Compliance Demonstration
- 21 2-11 6 NYCRR 212-2.1 (b): Compliance Demonstration
- 22 2-12 6 NYCRR 212-2.3 (b): Compliance Demonstration
- 24 2-13 6 NYCRR 212-2.3 (b): Compliance Demonstration
- 25 2-14 6 NYCRR 212-2.3 (b): Compliance Demonstration
- 26 2-15 6 NYCRR 212-2.3 (b): Compliance Demonstration
- 28 2-16 6 NYCRR 212-2.4 (b): Compliance Demonstration
- 29 2-17 6 NYCRR 212-2.4 (b): Compliance Demonstration

EU=1-FIBER,EP=EP401

- 30 2-18 6 NYCRR 212-2.4 (b): Compliance Demonstration

EU=1-FIBER,EP=EP401,Proc=FB1,ES=THOX1

- 32 2-19 6 NYCRR 212-1.7 (a): Compliance Demonstration
- 34 2-20 6 NYCRR 212-1.7 (b): Compliance Demonstration
- 35 2-21 6 NYCRR 212-2.1 (b): Compliance Demonstration

EU=1-FIBER,EP=EP405,Proc=FB4

- 38 2-22 6 NYCRR 212-1.7 (a): Compliance Demonstration
- 40 2-23 6 NYCRR 212-2.4 (b): Compliance Demonstration

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- 55 2-33 ECL 19-0301: Contaminant List
- 56 2-34 6 NYCRR 201-1.4: Malfunctions and start-up/shutdown activities
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- 57 27 6 NYCRR Subpart 201-5: Emission Unit Definition
- 59 2-36 6 NYCRR 201-5.1 (b): Compliance Demonstration
- 60 2-37 6 NYCRR 201-5.2 (c): Renewal deadlines for state facility permits
- 60 2-38 6 NYCRR 201-5.3 (c): CLCPA Applicability
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- 62 33 6 NYCRR Subpart 201-5: Process Definition By Emission Unit

NOTE: * preceding the condition number indicates capping.

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FEDERALLY ENFORCEABLE CONDITIONS

Renewal 1/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

(a) Except as otherwise provided by this Part, construction or operation of a new, modified or existing air contamination source without a registration or permit issued pursuant to this Part is prohibited.

(b) If an existing facility or emission source was subject to the permitting requirements of this Part at the time of construction or modification, and the owner or operator failed to apply for a permit or registration as described in this Part, the owner or operator must apply for a permit or registration in accordance with the provisions of this Part. The facility or emission source is subject to all regulations that were applicable to it at the time of construction or modification and any subsequent requirements applicable to existing emission sources.

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: Facility Permissible Emissions
Effective between the dates of 11/05/2015 and 11/04/2025

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 1.1:

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: 000108-95-2	(From Mod 2)	PTE: 19,000 pounds
	Name: PHENOL		
per year	CAS No: 0NY100-00-0	(From Mod 2)	PTE: 49,000 pounds
	Name: TOTAL HAP		
per year	CAS No: 0NY998-00-0	(From Mod 2)	PTE: 99,000 pounds
	Name: VOC		

Condition 2-1: Capping Monitoring Condition
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Replaces Condition(s) 3

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:

6 NYCRR 201-6.1

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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 201 and of the Act.

Item 2-1.6:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
 CAS No: 000108-95-2 PHENOL

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:

Facility-wide total emissions of phenol, a hazardous air pollutant (HAP), are limited to less than 10 tons during any consecutive twelve month period in order to establish the facility as a minor source of an individual HAP and therefore not subject to the Title V permitting requirements of 6NYCRR, Part 201-6. Compliance with this cap is to be demonstrated as follows:

- 1.) Maintenance and operation of emission control devices (THOX1, THOX2 and VCU03) as per the conditions established for 6NYCRR, Subparts 212-2.1(b) and 212-1.7.

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- 2.) If stack test results indicates that emissions exceed the major source threshold, the facility must submit a Title V permit application within 30 days after the results of the stack test(s) have been submitted to this Department.
- 3.) Annual phenol emissions shall be calculated using emissions factors developed from the most recent stack test results and monthly production data and totaled for each consecutive twelve month period in order to demonstrate on-going compliance with this emissions cap.
- 4.) Records demonstrating that the rolling twelve month total of phenol is less than 9.5 tons are to be made available to Department representatives on request and kept on-site for a period of 5 years.
- 5.) Annually, submit the monthly and 12-month rolling total emissions and compare to the above emission cap.

Parameter Monitored: PHENOL
 Upper Permit Limit: 9.5 tons per year
 Monitoring Frequency: MONTHLY
 Averaging Method: 12-MONTH TOTAL, ROLLED MONTHLY
 Reporting Requirements: ANNUALLY (CALENDAR)
 Reports due 30 days after the reporting period.
 The initial report is due 1/30/2025.
 Subsequent reports are due every 12 calendar month(s).

Condition 2-2: Capping Monitoring Condition
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR Subpart 201-7

Replaces Condition(s) 2

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 201-6.1

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

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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 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: 0NY100-00-0 TOTAL HAP

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:

Facility-wide total emissions of total hazardous air pollutants (HAP) are limited to less than 25 tons during any consecutive twelve month period in order to establish the facility as a minor source of total HAP and therefore not subject to the Title V permitting requirements of 6NYCRR, Part 201-6. Compliance with this cap is to be demonstrated as follows:

- 1.) Maintenance and operation of the emission control devices (THOX1, THOX2 and VCU03) as per the conditions established for 6NYCRR, Subparts 212-2.1(b) and 212-1.7.
- 2.) If stack test results indicates that emissions exceed the major source threshold, facility must submit a Title V permit application within 30 days after the results of the stack test(s) have been submitted to this Department.
- 3.) Maintenance and operation of the chlorine purification

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system and its associated wet scrubber system as per conditions established under 6NYCRR Subparts 212-2.3(b), 212-2.4(b), and 212-1.7(a).

4.) Annual HAP emissions shall be calculated using emissions factors developed from the most recent stack test results and monthly production data and totaled for each consecutive twelve month period in order to demonstrate on-going compliance with this emissions cap.

5.) Records demonstrating that the rolling twelve month total of HAPs is less than 24.5 tons are to be made available to Department representatives on request and kept on-site for a period of 5 years.

6.) Annually, submit the monthly and 12-month rolling total emissions and compare to the above emission cap.

Parameter Monitored: TOTAL HAP
 Upper Permit Limit: 24.5 tons per year
 Monitoring Frequency: MONTHLY
 Averaging Method: 12-MONTH TOTAL, ROLLED MONTHLY
 Reporting Requirements: ANNUALLY (CALENDAR)
 Reports due 30 days after the reporting period.
 The initial report is due 1/30/2025.
 Subsequent reports are due every 12 calendar month(s).

Condition 2-3: Capping Monitoring Condition
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR Subpart 201-7

Replaces Condition(s) 4

Item 2-3.1:

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 201-6.1
- 6 NYCRR 231-2.2

Item 2-3.2:

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

Item 2-3.3:

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.

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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 2-3.4:

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 2-3.5:

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 2-3.6:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 2-3.7:

Compliance Demonstration shall include the following monitoring:

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

Facility-wide total emissions of volatile organic compounds (VOC) are limited to less than 50 tons during any consecutive twelve month period in order to establish the facility as a minor source of VOC and therefore not subject to the New Source Review (NSR) requirements of 6NYCRR, Part 231-2 and the Title V permitting requirements of 6NYCRR, Part 201-6. Compliance with this cap is to be demonstrated as follows:

- 1.) Facility shall maintain and operate the emission control devices (THOX1, THOX2 and VCU03) as per the conditions established for 6NYCRR, Subparts 212-2.1(b) and 212-1.7.
- 2.) If stack test results indicates that emissions exceed the major source threshold, facility must submit a proposal to comply with the requirements of Part 231-2 and submit a Title V permit application within 30 days after the results of the stack test(s) have been submitted to this Department.

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- 3.) Annual VOC emissions shall be calculated using emissions factors developed from the most recent stack test results and monthly production data and totaled for each consecutive twelve month period in order to demonstrate on-going compliance with this emissions cap.
- 4.) Records demonstrating that the rolling twelve month total of VOC is less than 49.5 tons are to be made available to Department representatives on request and kept on-site for a period of 5 years.
- 5.) Annually, submit the monthly and 12-month rolling total emissions and compare to the above emission cap.

Parameter Monitored: VOC
 Upper Permit Limit: 49.5 tons per year
 Monitoring Frequency: MONTHLY
 Averaging Method: 12-MONTH TOTAL, ROLLED MONTHLY
 Reporting Requirements: ANNUALLY (CALENDAR)
 Reports due 30 days after the reporting period.
 The initial report is due 1/30/2025.
 Subsequent reports are due every 12 calendar month(s).

Condition 2-4: Visible Emissions Limited
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement:6 NYCRR 211.2

Replaces Condition(s) 31

Item 2-4.1:
 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 6: Two or more process emission sources may be simultaneously emitted to the outdoor atmosphere through a single emission point
Effective between the dates of 11/05/2015 and 11/04/2025

Applicable Federal Requirement:6 NYCRR 212-1.5 (a)

Item 6.1:
 In instances where air contaminants from two or more process emission sources may be simultaneously emitted to the outdoor atmosphere through a single emission point, the permissible emission rate or degree of air cleaning required is determined by using the sum of the process weights or emission rate potentials for all process emission sources.

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Condition 2-5: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

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

Replaces Condition(s) 7

Item 2-5.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

Item 2-5.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

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

Visible emissions are to be observed daily from each emission point. The processes normally operates with no visible emissions, so if visible emissions are observed, then the permittee will immediately investigate and determine the cause, make the necessary correction, and verify that the visible emissions' problem has been corrected by taking another visible emission reading.

Records of all visible emission observations, investigations and corrective actions shall be kept on-site in a format acceptable to the Department.

Parameter Monitored: OPACITY

Upper Permit Limit: 20 percent

Reference Test Method: Method 9

Monitoring Frequency: DAILY

Averaging Method: 6 MINUTE AVERAGE

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-6: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

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

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Item 2-6.1:

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

Emission Unit: 1-FIBER

Process: BH1

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

Item 2-6.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Cartridge baghouses are being installed to control dust emissions from shaping and sizing carbon/graphite products in the Main Processing Building (#4).

Particulate emissions are restricted as follows:

- (1) As required by 6NYCRR Part 212-2.4(b)(1), emissions of solid particulates are limited to less than 0.050 grains of particulates per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis (grains/dscf).
- (2) Daily visible emission observations and inspection of any fall-out from the process and/or dust collector(s) shall be completed by the operators during process operation.
- (3) Maintenance staff will inspect the baghouses per manufacturer's instructions on a quarterly basis.
- (4) If any visible emissions are observed, any particulate fall-out is observed or any pressure measurement is recorded outside the manufacturer range, then the facility shall inspect the source, initiate corrective action, and restore operation of the dust collector(s) and associated capture system(s) to normal operation as expeditiously as practicable.
- (5) Records shall be maintained including:
 - (i) a log documenting whether any visible emissions or fall-out were observed,
 - (ii) a log of the daily pressure drop measurements with reference to the allowable differential pressure range,
 - (iii) the date and time of the observation or measurement,
 - (iv) corrective action taken (if any),

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(v) the cause of any visible emissions, fall-out or pressure measurements outside the allowable range, and (vi) maintenance records. The records shall be kept on-site and be made available to the Department upon request.

(6) Compliance testing shall be conducted at the request of the Department.

Parameter Monitored: PARTICULATES
 Upper Permit Limit: 0.050 grains per dscf
 Reference Test Method: EPA Method 5
 Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
 Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST METHOD INDICATED
 Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-7: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

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

Item 2-7.1:

The Compliance Demonstration activity will be performed for the Facility.

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

Item 2-7.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Cartridge baghouses are being installed to control dust emissions from shaping and sizing carbon/graphite products in the Main Processing Building (#4).

Daily differential pressure measurements of the cartridge baghouses (Emission Unit 1-FIBER, EP 406, ES BH001) shall be completed during normal process operation. The purpose of the daily differential pressure measurements is to detect changes in the long term performance of the control device such as blinding of or holes in the baghouse cartridges. Differential pressure shall be measured between the inlet to and outlet from the control devices. The dust collectors shall be operated within the differential pressure range specified by the manufacturer, identified in the permit application as 1 to 10 inches of water. The magnehelic differential pressure gauges shall

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be calibrated annually or as required by the manufacturer.

The daily differential pressure measurements shall be recorded in a manner acceptable to DEC. These records shall be submitted to DEC upon request.

Parameter Monitored: PRESSURE DROP
 Lower Permit Limit: 1 inches of water
 Upper Permit Limit: 10 inches of water
 Monitoring Frequency: DAILY
 Averaging Method: RANGE - NOT TO FALL OUTSIDE OF STATED RANGE AT ANY TIME
 Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

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

Condition 2-8: Compliance Demonstration
 Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-1.7 (a)

Replaces Condition(s) 8

Item 2-8.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER
 Process: FB2

Regulated Contaminant(s):
 CAS No: 000108-95-2 PHENOL
 CAS No: 0NY998-00-0 VOC

Item 2-8.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Within 60 days after start-up, April 18, 2012, the facility was required to conduct a representative stack test to determine the emissions from one of the gas fired drying ovens using acceptable reference methods pursuant to 6NYCRR, Part 202-1.

When the initial permit was issued on February 17, 2009, it required that the stack test would determine emissions of carbon monoxide (CO), nitrogen oxides (NOx), sulfur compounds, phenol, naphthalene, hydrogen sulfide and volatile organic compounds (VOC). Based on updated process information, it was later determined that stack testing to

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determine emissions of carbon monoxide, nitrogen oxides, sulfur compounds, phenol, naphthalene, and hydrogen sulfide would no longer be required. However, total hydrocarbons concentration would be determined using EPA Reference Method 25A. All hydrocarbon emissions would also be assumed to be phenol.

A stack test protocol was submitted detailing the sampling and analytical methods to be used. The outlet test was required to consist of three separate runs using the applicable reference test methods. The protocol included details describing the operating conditions under which the test would be conducted, including but not limited to production rates. The billet dryer has the ability to operate either in a batch mode or in a continuous mode similar to a tunnel kiln. During the stack test, it was planned that the dryer would be operated as a batch process with the introduction of carts into the drying oven spaced over time, rather than batch loading of the entire drying oven at one time.

The protocol was approved by this Department prior to the commencement of the stack test.

The test was performed on April 18, 2012, and was witnessed by a representative of this Department.

The test report was received by the Department on May 15, 2012. The stack test results indicated a THC emissions average of 0.04 lbs/hr, within permit limits.

If operation of this process (quantities/feed rates/characteristics of feed materials) is modified in such a fashion that emissions of VOCs or other regulated contaminants have the potential to increase, additional stack testing of the gas fired drying ovens may be required by the Department.

If future stack test results indicate emission rates higher than those used in the Part 212 analysis submitted as part of the original permit application, Ren 0 Mod 0, a revised analysis shall be submitted to this Department within 60 days after the completion of the test.

If test results and/or the impact analysis determine that an emissions control device will be required pursuant to 6NYCRR, Subpart 212-2.1(b) and Table 3 of 212-2.3(a) for criteria air contaminants or Table 4 of 212-2.3(b) for non-criteria air contaminants, a permit modification including a proposal for corrective action shall be submitted within 30 days from a written request from this Department. Non-criteria contaminants assigned an

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environmental rating of B or C require emission controls when the emission rate potential (ERP) is greater than 10 lb/hr.

Parameter Monitored: VOC
 Upper Permit Limit: 10 pounds per hour
 Reference Test Method: EPA Reference Method 25A
 Monitoring Frequency: SINGLE OCCURRENCE
 Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -
 SEE MONITORING DESCRIPTION
 Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-9: Compliance Demonstration
 Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-2.1 (b)

Replaces Condition(s) 9

Item 2-9.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER
 Process: FB2

Regulated Contaminant(s):
 CAS No: 000108-95-2 PHENOL

Item 2-9.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Facility shall maintain records of the number of molds made per day, the amount of each phenolic resin product used in each batch prepared for the molds, and a current MSDS for each phenolic resin product used.

The concentration of free phenol in each phenolic resin as indicated by the MSDS may not exceed 5.0% by weight. The concentration of free phenol used in calculating emissions from this process shall be as indicated by the MSDS. Facility shall request annual certifications from the supplier(s) verifying the free phenol content of the phenolic resin products used. These records are to be kept on-site indefinitely and made available to Department representatives on request.

Any increase in the concentration of free phenol in the mixture above 5.0% by weight will require revised

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emissions data and a Part 212 analysis submitted to the Department within 30 days.

If odors are noted off-site from the drying ovens emission points, the facility will submit a proposal to address the odors including but not limited to raising the stack heights to increase atmospheric dispersion.

If it is determined that the steam curing operation is a source of fugitive odors, a proposal to address these odors will also be required.

Any odor proposal shall be submitted within 30 days from a written request by this Department.

Annually, report if any mixtures contained more than 5% free phenol and a summary of the odor surveys.

Parameter Monitored: PHENOL
 Upper Permit Limit: 5 percent by weight
 Monitoring Frequency: DAILY
 Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -
 SEE MONITORING DESCRIPTION
 Reporting Requirements: ANNUALLY (CALENDAR)
 Reports due 30 days after the reporting period.
 The initial report is due 1/30/2025.
 Subsequent reports are due every 12 calendar month(s).

Condition 2-10: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement:6 NYCRR 212-2.1 (b)

Item 2-10.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER
 Process: FB4

Regulated Contaminant(s):
 CAS No: 007782-50-5 CHLORINE

Item 2-10.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Chlorine Purification Process. To ensure that uncontrolled chlorine will not be released into the atmosphere from this process, the facility will design, operate, and maintain the system with appropriate interlocks and operating procedures as described

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below.

Chlorine may be introduced into only one induction furnace at any given time. The THOX1 exhaust hood which leads to thermal oxidizer THOX1 must be moved from its operating position and the air/chlorine exhaust hood must be moved into its operating position prior to introduction of chlorine.

Only one induction furnace may be ducted to the wet scrubber system at any point in time. The control system shall be designed to lock out chlorine gas inlet solenoids to all other furnaces if one chlorine gas inlet valve is already energized open.

The control interlocks system shall be designed so that any chlorine gas inlet solenoid valve can be opened and remain open only under the following conditions:

- i. Corresponding air/chlorine exhaust hood is positioned over the exhaust port and contacts the proximity switch.
- ii. Automatic blast gate between the air/chlorine exhaust hood and the air/chlorine header to the wet scrubber system is in the open position.
- iii. Chlorine scrubber system is operating within design parameters and ready for air/chlorine exhaust gas.
- iv. All other furnace chlorine gas solenoid valves are closed.
- v. All other furnace automatic blast gates between the air/chlorine exhaust hoods and the air/chlorine header to the wet scrubber system are closed.
- vi. All other air/chlorine exhaust hood proximity switches are open (no contact).

Records of malfunctions, repairs, and maintenance on the interlock system shall be maintained on-site for a minimum of five years and shall be made available to the Department upon request.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-11: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-2.1 (b)

Item 2-11.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER

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Process: FB4

Regulated Contaminant(s):

CAS No: 0NY998-00-0	VOC
CAS No: 0NY100-00-0	TOTAL HAP
CAS No: 000108-95-2	PHENOL

Item 2-11.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

As noted in the FB4 process description, the facility may opt to take billets which have been heated to 2,000 degrees C in the induction furnaces, cool and cut the billets into customer specification pieces, and coat the pieces by hand-application with either a phenolic coating or methanol coating. The coated pieces will be put back into an induction furnace and again heated to 1,900 to 2,000 degrees C prior to chlorine purification.

Facility shall maintain records of the number of loads treated in this fashion, the quantity of each coating used, MSDS for each coating used, and calculations of the emissions (phenol, methanol, total HAP, VOC) associated with application of the coatings, to prove compliance with the capping requirements of 6NYCRR Subpart 201-7. These records are to be kept on-site for a minimum of five years and made available to Department representatives upon request.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-12: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement:6 NYCRR 212-2.3 (b)

Item 2-12.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER
Process: FB4

Regulated Contaminant(s):

CAS No: 007782-50-5	CHLORINE
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Item 2-12.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Process and control parameters for the two-stage wet scrubber system used to control chlorine and metal chloride particulate emissions from the Chlorine Purification Process must be monitored to demonstrate that the scrubber system is continuously operated during the purification process and maintained in such a manner as to ensure chlorine emissions from EP405 are controlled to a minimum of 99% and particulate emissions do not exceed 0.050 grains per dry standard cubic foot. A daily log is to be kept on site which will record monitored parameters.

For the Stage 1 packed scrubber, a solution of dilute NaOH and NaHSO₃ is recirculated from an integral sump to which fresh water is continuously added, producing an overflow to a floor drain. Chemicals are automatically dosed as need into the liquid recirculation stream based on pH (NaOH) and Oxidation-Reduction Potential or ORP (Na₂SO₃) control systems. Overflow will be at pH = 9-9.5 and contain roughly 500 ppmw of unused Sulfite. Stage 2 is a high energy venturi scrubber intended primarily for particulate collection. Fresh water is also continuously added to this sump and overflowed to a floor drain.

Stage 1 scrubber pressure drop, sump blowdown flow rate (45 gph), pH, and Oxidation-Reduction Potential and Stage 2 pressure drop and sump blowdown flow rate (30 gph) will be continuously monitored and maintained within manufacturer's recommended parameter ranges. Operating/monitoring procedures shall be put in place to ensure that the water levels in the sumps are adequate to ensure proper inlet flows to the scrubbers. Operating parameters will be verified during stack testing and may be adjusted as needed based on the test results.

All parameters shall be recorded once per shift. Records will be maintained onsite and provided to the Department upon request.

This condition is for pressure drop across the Stage 1 packed tower scrubber.

Parameter Monitored: PRESSURE DROP

Upper Permit Limit: 11 inches of water

Monitoring Frequency: PER SHIFT

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

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Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-13: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-2.3 (b)

Item 2-13.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER
Process: FB4

Regulated Contaminant(s):
CAS No: 007782-50-5 CHLORINE

Item 2-13.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Process and control parameters for the two-stage wet scrubber system used to control chlorine and metal chloride particulate emissions from the Chlorine Purification Process must be monitored to demonstrate that the scrubber system is continuously operated during the purification process and maintained in such a manner as to ensure chlorine emissions from EP405 are controlled to a minimum of 99% and particulate emissions do not exceed 0.050 grains per dry standard cubic foot. A daily log is to be kept on site which will record monitored parameters.

For the Stage 1 packed scrubber, a solution of dilute NaOH and NaHSO₃ is recirculated from an integral sump to which fresh water is continuously added, producing an overflow to a floor drain. Chemicals are automatically dosed as need into the liquid recirculation stream based on pH (NaOH) and Oxidation-Reduction Potential or ORP (Na₂SO₃) control systems. Overflow will be at pH = 9-9.5 and contain roughly 500 ppmw of unused Sulfite. Stage 2 is a high energy venturi scrubber intended primarily for particulate collection. Fresh water is also continuously added to this sump and overflowed to a floor drain.

Stage 1 scrubber pressure drop, sump blowdown flow rate (45 gph), pH, and Oxidation-Reduction Potential and Stage 2 pressure drop and sump blowdown flow rate (30 gph) will be continuously monitored and maintained within manufacturer's recommended parameter ranges.

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Operating/monitoring procedures shall be put in place to ensure that the water levels in the sumps are adequate to ensure proper inlet flows to the scrubbers. Operating parameters will be verified during stack testing and may be adjusted as needed based on the test results.

All parameters shall be recorded once per shift. Records will be maintained onsite and provided to the Department upon request.

This condition is for Oxidation-Reduction Potential in the Stage 1 packed tower scrubber.

Parameter Monitored: OXIDATION REDUCTION POTENTIAL

Upper Permit Limit: 600 millivolts

Monitoring Frequency: PER SHIFT

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

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-14: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-2.3 (b)

Item 2-14.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER

Process: FB4

Regulated Contaminant(s):

CAS No: 007782-50-5 CHLORINE

Item 2-14.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Process and control parameters for the two-stage wet scrubber system used to control chlorine and metal chloride particulate emissions from the Chlorine Purification Process must be monitored to demonstrate that the scrubber system is continuously operated during the purification process and maintained in such a manner as to ensure chlorine emissions from EP405 are controlled to a minimum of 99% and particulate emissions do not exceed 0.050 grains per dry standard cubic foot. A daily log is to be kept on site which will record monitored parameters.

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For the Stage 1 packed scrubber, a solution of dilute NaOH and NaHSO₃ is recirculated from an integral sump to which fresh water is continuously added, producing an overflow to a floor drain. Chemicals are automatically dosed as need into the liquid recirculation stream based on pH (NaOH) and Oxidation-Reduction Potential or ORP (Na₂SO₃) control systems. Overflow will be at pH = 9-9.5 and contain roughly 500 ppmw of unused Sulfite. Stage 2 is a high energy venturi scrubber intended primarily for particulate collection. Fresh water is also continuously added to this sump and overflowed to a floor drain.

Stage 1 scrubber pressure drop, sump blowdown flow rate (45 gph), pH, and Oxidation-Reduction Potential and Stage 2 pressure drop and sump blowdown flow rate (30 gph) will be continuously monitored and maintained within manufacturer's recommended parameter ranges. Operating/monitoring procedures shall be put in place to ensure that the water levels in the sumps are adequate to ensure proper inlet flows to the scrubbers. Operating parameters will be verified during stack testing and may be adjusted as needed based on the test results.

All parameters shall be recorded once per shift. Records will be maintained onsite and provided to the Department upon request.

This condition is for sump blowdown flow rate from the Stage 1 packed tower scrubber.

Parameter Monitored: FLOW RATE

Lower Permit Limit: 45 gallons per hour

Monitoring Frequency: PER SHIFT

Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-15: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-2.3 (b)

Replaces Condition(s) 37

Item 2-15.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER

Process: FB4

Regulated Contaminant(s):

CAS No: 007782-50-5 CHLORINE

Permit ID: 9-2911-00381/00002

Facility DEC ID: 9291100381

Item 2-15.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Process and control parameters for the two-stage wet scrubber system used to control chlorine and metal chloride particulate emissions from the Chlorine Purification Process must be monitored to demonstrate that the scrubber system is continuously operated during the purification process and maintained in such a manner as to ensure chlorine emissions from EP405 are controlled to a minimum of 99% and particulate emissions do not exceed 0.050 grains per dry standard cubic foot. A daily log is to be kept on site which will record monitored parameters.

For the Stage 1 packed scrubber, a solution of dilute NaOH and NaHSO₃ is recirculated from an integral sump to which fresh water is continuously added, producing an overflow to a floor drain. Chemicals are automatically dosed as need into the liquid recirculation stream based on pH (NaOH) and Oxidation-Reduction Potential or ORP (Na₂SO₃) control systems. Overflow will be at pH = 9-9.5 and contain roughly 500 ppmw of unused Sulfite. Stage 2 is a high energy venturi scrubber intended primarily for particulate collection. Fresh water is also continuously added to this sump and overflowed to a floor drain.

Stage 1 scrubber pressure drop, sump blowdown flow rate (45 gph), pH, and Oxidation-Reduction Potential and Stage 2 pressure drop and sump blowdown flow rate (30 gph) will be continuously monitored and maintained within manufacturer's recommended parameter ranges. Operating/monitoring procedures shall be put in place to ensure that the water levels in the sumps are adequate to ensure proper inlet flows to the scrubbers. Operating parameters will be verified during stack testing and may be adjusted as needed based on the test results.

All parameters shall be recorded once per shift. Records will be maintained onsite and provided to the Department upon request.

This condition is for pH for the Stage 1 packed tower scrubber.

Parameter Monitored: PH

Lower Permit Limit: 8.0 pH (STANDARD) units

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Monitoring Frequency: PER SHIFT
 Averaging Method: MINIMUM - NOT TO FALL BELOW STATED
 VALUE AT ANY TIME
 Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-16: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

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

Item 2-16.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER
 Process: FB4

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

Item 2-16.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Process and control parameters for the two-stage wet scrubber system used to control chlorine and metal chloride particulate emissions from the Chlorine Purification Process must be monitored to demonstrate that the scrubber system is continuously operated during the purification process and maintained in such a manner as to ensure chlorine emissions from EP405 are controlled to a minimum of 99% and particulate emissions do not exceed 0.050 grains per dry standard cubic foot. A daily log is to be kept on site which will record monitored parameters.

For the Stage 1 packed scrubber, a solution of dilute NaOH and NaHSO₃ is recirculated from an integral sump to which fresh water is continuously added, producing an overflow to a floor drain. Chemicals are automatically dosed as need into the liquid recirculation stream based on pH (NaOH) and Oxidation-Reduction Potential or ORP (Na₂SO₃) control systems. Overflow will be at pH = 9-9.5 and contain roughly 500 ppmw of unused Sulfite. Stage 2 is a high energy venturi scrubber intended primarily for particulate collection. Fresh water is also continuously added to this sump and overflowed to a floor drain.

Stage 1 scrubber pressure drop, sump blowdown flow rate (45 gph), pH, and Oxidation-Reduction Potential and Stage

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2 pressure drop and sump blowdown flow rate (30 gph) will be continuously monitored and maintained within manufacturer's recommended parameter ranges. Operating/monitoring procedures shall be put in place to ensure that the water levels in the sumps are adequate to ensure proper inlet flows to the scrubbers. Operating parameters will be verified during stack testing and may be adjusted as needed based on the test results.

All parameters shall be recorded once per shift. Records will be maintained onsite and provided to the Department upon request.

This condition is for sump blowdown flow rate from the Stage 2 venturi scrubber.

Parameter Monitored: FLOW RATE
 Lower Permit Limit: 30 gallons per hour
 Monitoring Frequency: PER SHIFT
 Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
 Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-17: Compliance Demonstration
 Effective between the dates of 08/13/2024 and 11/04/2025

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

Item 2-17.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER
 Process: FB4

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

Item 2-17.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Process and control parameters for the two-stage wet scrubber system used to control chlorine and metal chloride particulate emissions from the Chlorine Purification Process must be monitored to demonstrate that the scrubber system is continuously operated during the purification process and maintained in such a manner as to ensure chlorine emissions from EP405 are controlled to a minimum of 99% and particulate emissions do not exceed 0.050 grains per dry standard cubic foot. A daily

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log is to be kept on site which will record monitored parameters.

For the Stage 1 packed scrubber, a solution of dilute NaOH and NaHSO₃ is recirculated from an integral sump to which fresh water is continuously added, producing an overflow to a floor drain. Chemicals are automatically dosed as need into the liquid recirculation stream based on pH (NaOH) and Oxidation-Reduction Potential or ORP (Na₂SO₃) control systems. Overflow will be at pH = 9-9.5 and contain roughly 500 ppmw of unused Sulfite. Stage 2 is a high energy venturi scrubber intended primarily for particulate collection. Fresh water is also continuously added to this sump and overflowed to a floor drain.

Stage 1 scrubber pressure drop, sump blowdown flow rate (45 gph), pH, and Oxidation-Reduction Potential and Stage 2 pressure drop and sump blowdown flow rate (30 gph) will be continuously monitored and maintained within manufacturer's recommended parameter ranges. Operating/monitoring procedures shall be put in place to ensure that the water levels in the sumps are adequate to ensure proper inlet flows to the scrubbers. Operating parameters will be verified during stack testing and may be adjusted as needed based on the test results.

All parameters shall be recorded once per shift. Records will be maintained onsite and provided to the Department upon request.

This condition is for pressure drop across the Stage 2 venturi scrubber.

Parameter Monitored: PRESSURE DROP
 Lower Permit Limit: 10 inches of water
 Monitoring Frequency: PER SHIFT
 Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
 Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 2-18: Compliance Demonstration
 Effective between the dates of 08/13/2024 and 11/04/2025

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

Item 2-18.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER Emission Point: EP401

Regulated Contaminant(s):

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CAS No: 0NY075-00-0 PARTICULATES

Item 2-18.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Particulate emissions from the thermal oxidizer THOX1 (EP 401) shall not exceed 0.050 grains per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis.

Compliance shall be demonstrated by a stack test conducted using Method 5 and acceptable procedures as per 6NYCRR, Part 202-1 and 40 CFR Part 60. Test results shall be submitted to this Department within 60 days from the completion of the test.

Upon completion of the test and demonstration of compliance with the standard, compliance will be continued through an established maintenance program on the oxidizer.

Testing was carried out on THOX1 October 19-20, 2010. The test report was sent to the Department under a cover letter from the facility dated December 31, 2010. The stack test results from three test runs indicated an average outlet particulate concentration of 0.034 grains per dry standard cubic foot of exhaust gas, within permit limits. The test runs were performed with two 96" induction furnaces in operation simultaneously.

During a meeting with the facility held on February 4, 2011, and documented by letter to the facility from the Department dated February 14, 2011, these test results were discussed. The results indicated that when multiple furnaces (more than two) are operating with overlapping batches, the semi-continuous nature of the emissions could place them close to the 0.050 gr/dscf limit. It was agreed that a third power pack could be installed without a permit modification or additional testing as long as no more than two furnaces were operating simultaneously on the same cycle. A third power supply was installed in March 2013.

If facility records indicate that four furnaces are being operated on the same cycle on a routine basis, the facility may be required to carry out additional particulate emission testing under maximum operating conditions, at the Department's discretion.

Parameter Monitored: PARTICULATES

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Upper Permit Limit: 0.050 grains per dscf
 Reference Test Method: Method 5
 Monitoring Frequency: SINGLE OCCURRENCE
 Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -
 SEE MONITORING DESCRIPTION
 Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-19: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-1.7 (a)

Item 2-19.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER	Emission Point: EP401
Process: FB1	Emission Source: THOX1

Regulated Contaminant(s):
 CAS No: 0NY998-00-0 VOC
 CAS No: 000108-95-2 PHENOL

Item 2-19.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Within 60 days after start-up, the facility was required to conduct a stack emissions test on the inlet and outlet of the thermal oxidizer (THOX1), emission point 00401, using acceptable reference methods pursuant to 6NYCRR, Part 202-1 in order to determine the control efficiency of the oxidizer.

When the initial permit was issued on February 17, 2009, it was required that the stack test would also determine emissions of carbon monoxide (CO), particulates, nitrogen oxides (NOx), sulfur compounds, hydrogen sulfide (H2S), phenol, benzene, and volatile organic compounds (VOC). Based on updated process information, it was later determined that stack testing to determine emissions of carbon monoxide, nitrogen oxides, sulfur compounds, hydrogen sulfide, phenol, and benzene would no longer be required. However, particulates would still be evaluated using EPA Reference Method 5, and inlet and outlet total hydrocarbons concentrations would be determined using EPA Reference Method 25A. The hydrocarbon data would be used to calculate destruction removal efficiency (DRE). All hydrocarbon emissions would also be assumed to be phenol.

A stack test protocol was submitted detailing the sampling

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and analytical methods to be used. The inlet and outlet tests were required to consist of three separate runs using the applicable reference test methods. The protocol was to be submitted 30 days prior to the source test and was required to include the date and time of the test. The protocol was also to include details describing the operating conditions under which the test would be conducted, including but not limited to production rates, number of furnaces operating, and minimum oxidizer temperature. The source test was required to be representative of worst case (maximum) production rates. Originally the facility was required to perform the test with two 96" and two 50" induction furnaces operating concurrently; however, due to the facility only having installed two power packs to supply electricity to the induction furnaces, and only being able to operate one induction furnace per power pack at a time, it was agreed that the test would be performed with two 96" induction furnaces operating simultaneously with maximum raw material loads. The test protocol was approved by the Department prior to testing.

The test was performed on October 19-20, 2010, and was witnessed by a representative of the Department. Plant operators were required to record the production data and process and control equipment operating conditions during the test. This data, along with strip charts, was to be submitted as part of the test results. Test results were required to be submitted to this Department within 60 days from the completion of the test.

The test report was sent to the Department under a cover letter from the facility dated December 31, 2010. The stack test results from three test runs indicated an average outlet emission rate of 0.013 lbs/hr of TNMHC (as carbon). DRE was 99.970% as maximum quantifiable at an average THOX1 combustion temperature of 1600 degrees F. The test runs were performed with two 96" induction furnaces in operation simultaneously.

If operation of this process (quantities/load size/characteristics of feed materials/number of furnaces operating simultaneously) is modified in such a fashion that emissions of VOCs or other regulated contaminants have the potential to increase, additional stack testing of the THOX1 unit may be required by the Department.

If future stack results indicate emission rates greater than those used in the Part 212 analysis submitted as part of the original permit application, Ren 0 Mod 0, a revised analysis shall be submitted to the Department within 60 days after the completion of the test.

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If test results and/or the Part 212 analysis indicate that additional emissions control will be required pursuant to 6NYCRR, Subpart 212-2.1(b) and Table 4 of Subpart 212-2.3(b), a permit modification including a proposal for corrective action shall be submitted within 30 days from a written request from this Department.

Parameter Monitored: VOC
 Lower Permit Limit: 90 percent reduction
 Reference Test Method: Federal Reference Method 25A
 Monitoring Frequency: SINGLE OCCURRENCE
 Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE - SEE MONITORING DESCRIPTION
 Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-20: Compliance Demonstration
 Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-1.7 (b)

Item 2-20.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER	Emission Point: EP401
Process: FB1	Emission Source: THOX1

Regulated Contaminant(s):
 CAS No: 0NY998-00-0 VOC

Item 2-20.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

A continuous temperature recorder will monitor the exhaust gas temperature from the thermal oxidizer, THOX1, emission point EP401.

The operating temperature is to be maintained and alarmed at a minimum of 1600 degrees F, per the results of stack testing performed October 19-20, 2010. If the temperature falls below the minimum, the facility shall immediately initiate corrective action.

The following is the required maintenance that is to be performed on the thermal oxidizers:

1. Between runs - clean burner igniters
2. Between runs - clean burner observation ports

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3. Between runs - clean flame sensors (flame rods or scanner)
4. Visually check for signs of any overheating
5. Clean blower inlet filters
6. Review last run charts for any problems
7. As needed adjust burner combustion
8. Visually check actuators and linkages
9. Check display on O2 transmitters (calibrated and ports cleaned quarterly)
10. After any adjustments or cleaning-fire up thermal oxidizer and check purge logic, low fire start, flame signal and burner stability
11. Perform yearly NFPA86 inspection for limits, burners and controls

Records of maintenance and temperature readings are to be kept on-site in a format easily accessible and made available to Department representatives on request. Records are to be kept on-site for a period of five years.

Submit a deviation report quarterly and include deviations of the temperature limit with the actual temperature, the cause, and the corrective actions.

Manufacturer Name/Model Number: Honeywell DR4500A Truline Circular Chart Recorder
 Parameter Monitored: TEMPERATURE
 Lower Permit Limit: 1600 degrees Fahrenheit
 Monitoring Frequency: CONTINUOUS
 Averaging Method: MINIMUM-NOT TO FALL BELOW EXCEPT DURING STARTUP/SHUTDOWN
 Reporting Requirements: QUARTERLY (CALENDAR)
 Reports due 30 days after the reporting period.
 The initial report is due 10/30/2024.
 Subsequent reports are due every 3 calendar month(s).

Condition 2-21: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement:6 NYCRR 212-2.1 (b)

Item 2-21.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER	Emission Point: EP401
Process: FB1	Emission Source: THOX1

Regulated Contaminant(s):
 CAS No: 0NY998-00-0 VOC
 CAS No: 000108-95-2 PHENOL

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Item 2-21.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Facility is not limited to using a specific phenolic resin product in the manufacture of RCFB molds but may use phenolic resin products from different suppliers which meet established specifications for free phenol concentration.

When the initial permit was under development in 2008, emissions calculations were based on the usage of a specific phenolic resin product, Hexion. The preparation of the mixture for each RCFB mold included 63 pounds of Hexion containing a maximum of 5% by weight phenol (as per MSDS). Assuming a maximum capacity of 16 molds per 96" induction furnace and a maximum of two furnaces operating concurrently, the concentration of phenol which could be potentially driven off in the two furnaces and vented to the thermal oxidizer was estimated at 100 pounds. Volatile emissions were expected to be generated over a 14 hour period, although it was expected that at the 1850 degrees C furnace operating temperature, the greatest portion would be driven off in the first few hours. Therefore, the emission rate potential (ERP) of phenol was expected to be greater than 10 pounds per hour. At that ERP, phenol as a 'B' rated contaminant is required by Table 4 of Subpart 212-2.3(b) to have a minimum of 90% control efficiency. Compliance with 6NYCRR, Subpart 212-2.1(b) and Table 4 of Subpart 212-2.3(b) was required to be demonstrated by a stack emission test.

When the initial permit was issued, February 17, 2009, a stack test was required on both the inlet and the outlet of the oxidizer THOX1 to verify the ERP of phenol, naphthalene, and total volatile organic compounds (VOC) and the degree of emissions control required by Table 4. Based on updated process information, it was later determined that a non-speciated Method 25A test method would be utilized to determine total hydrocarbons concentration. All hydrocarbons would be assumed to be phenol.

The test was performed on October 19-20, 2010, and was witnessed by a representative of the Department. Plant operators were required to record the production data and process and control equipment operating conditions during the test. This data, along with strip charts, was to be submitted as part of the test results. Test results were required to be submitted to this Department within 60 days

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from the completion of the test.

The test report was sent to the Department under a cover letter from the facility dated December 31, 2010. The stack test results from three test runs indicated an average outlet emission rate of 0.013 lbs/hr of TNMHC (as carbon). DRE was 99.970% as maximum quantifiable at an average THOX1 combustion temperature of 1600 degrees F. The test runs were performed with two 96" induction furnaces in operation simultaneously.

If operation of this process (quantities/load size/characteristics of feed materials/number of furnaces operating simultaneously) is modified in such a fashion that emissions of VOCs or other regulated contaminants have the potential to increase, additional stack testing of the THOX1 unit may be required by the Department.

Stack test results indicating a greater ERP and/or a control efficiency of less than the 90% used to determine actual emissions will require the facility to submit revised emissions data and impact analysis screening. Any increase in ERP will need to be re-evaluated in terms of Part 212 and the control efficiency of the thermal oxidizer.

Compliance with Subpart 212-2.1(b) will be maintained as follows by following the stipulations below which are detailed in separate permit conditions:

- 1.) The thermal oxidizer (THOX1) is to operate at all times material is being processed in any of the three 96" furnaces, the 25" furnace, the L&L Bake oven, or the Nabertherm furnace.
- 2.) The oxidizer temperature is to be maintained at a minimum of 1600 degrees F, as demonstrated in the October 2010 stack test.
- 3.) Operations will be limited to a maximum of four induction furnaces operating concurrently. The 33" and 52" furnaces will heat treat only previously carbonized materials.

Parameter Monitored: PHENOL

Lower Permit Limit: 90 percent reduction

Monitoring Frequency: CONTINUOUS

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

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

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Condition 2-22: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-1.7 (a)**Item 2-22.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER Emission Point: EP405
Process: FB4Regulated Contaminant(s):
CAS No: 007782-50-5 CHLORINE**Item 2-22.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Chlorine emissions from the Chlorine Purification Process have been assigned an Environmental Rating of B under 6 NYCRR Part 212. As stated in the permit application for this process, chlorine emission rate potential prior to control is 7.3 lbs/hr, and the degree of air cleaning provided by the two-stage wet scrubber system will be a minimum of 99%.

Within 60 days after achieving the maximum production rate but not later than 180 days after initial start-up of the Chlorine Purification Process, the facility shall conduct a representative stack test on the inlet and outlet of the wet scrubber system (emission sources 00WS1 and 00WS2), emission point EP405, using acceptable reference methods pursuant to 6NYCRR Subpart 202-1 and 40 CFR 60 in order to determine the control efficiency of the wet scrubber system for removal of chlorine and the emission rate for this contaminant. During this test, monitoring parameters for the control equipment including pH, Oxidation-Reduction Potential (ORP), pressure drop across each scrubber stage, and sump blowdown flow rate for each scrubber stage shall be recorded every 15 minutes during the entire period of the performance tests.

A stack test protocol shall be submitted detailing the sampling and analytical methods to be used. The inlet and outlet tests shall each consist of three separate runs using the applicable reference test methods. The protocol is to be submitted 30 days prior to the source test and shall include the date and time of the test. The protocol is also to include details describing the operating conditions under which the test will be conducted, including but not limited to the specific furnace(s) to be

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used, the size and nature of the load being processed (billets vs. pieces), the time frame in the process during which sampling will be performed (applicant has stated that while chlorine emissions will occur throughout the 6-hour batch run time, particulate emissions will occur during the first half (first 3 hours) of the batch run time), and the feed rate of chlorine during testing (applicant information indicates a maximum chlorine feed rate of 7.3 lbs/hr). The test protocol must be approved by the Department prior to testing. The test is to be witnessed by a representative of the Department.

The source test shall be representative of worst case (maximum) production rates. Plant operators must record the production data and process and control equipment operating conditions during the test, including key operating parameters for the wet scrubber system.

Test results shall be submitted to this Department within 60 days after completion of the test. The report shall include operating parameters recorded during the test. The hourly averages shall be used to confirm/establish the operating limits. The final report must be clear as to how the results correlate with the production and operating data. If the operating limits established during the test differ from the limits proposed in the permit, a permit modification application shall be submitted no later than 90 days after receiving approval of the performance test report proposing updates to the permit limits.

Control efficiencies lower than and/or stack test emission rates higher than those used to determine facility emissions in the permit application for Ren 0 Mod 0 may require a Part 212 analysis and/or revisions to control parameter operating limits. If test results and/or Part 212 analyses indicate that additional emissions control will be required, a permit modification including a proposal for corrective action shall be submitted within 30 days after a written request from this Department.

Upon completion of the test and demonstration of compliance with the permit limit, operating parameter limits shall be updated as needed and compliance will be continued through an established maintenance and operating program for the scrubber system.

Parameter Monitored: CHLORINE

Lower Permit Limit: 99 percent reduction

Reference Test Method: 40 CFR 60

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

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Averaging Method: MINIMUM - NOT TO FALL BELOW STATED
 VALUE - SEE MONITORING DESCRIPTION
 Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-23: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

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

Item 2-23.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-FIBER Emission Point: EP405
 Process: FB4

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

Item 2-23.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING
 Monitoring Description:

Particulate emissions from the chlorine purification system wet scrubber system (EP405) shall not exceed 0.050 grains per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis.

Within 60 days after achieving the maximum production rate but not later than 180 days after initial start-up, the facility shall conduct a representative stack test to determine the particulate emissions from the chlorine purification system wet scrubber system (Emission Point EP405). Compliance shall be demonstrated using Method 5 and acceptable procedures as per 6NYCRR Subpart 202-1 and 40 CFR Part 60. During this test monitoring parameters for the control equipment including pH, Oxidation-Reduction Potential (ORP), pressure drop across each scrubber stage, and sump blowdown flow rate for each scrubber stage shall be recorded every 15 minutes during the entire period of the performance tests.

A stack test protocol shall be submitted to the Department detailing the sampling and analytical methods to be used. The test shall consist of three separate runs using the applicable reference test methods. The protocol is to be submitted 30 days prior to the source test and shall include the date and time of the test. The protocol is also to include a details describing the operating conditions under which the test will be conducted, including but not limited to the specific furnace(s) to be used, the size and nature of the load being processed

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(billets vs. pieces), the time frame in the process during which sampling will be performed (applicant has stated that while chlorine emissions will occur throughout the 6-hour batch run time, particulate emissions will occur during the first half (first 3 hours) of the batch run time), and the feed rate of chlorine during testing (applicant information indicates a maximum chlorine feed rate of 7.3 lbs/hr). The protocol must be approved by this Department prior to the commencement of the stack test. The test is to be witnessed by a representative of this Department.

The source test shall be representative of worst case (maximum) production rates. Plant operators must record the production data and process and control equipment operating conditions during the test, including key operating parameters for the wet scrubber system.

Test results shall be submitted to this Department within 60 days from the completion of the test. The report shall include operating parameters recorded during the test. The hourly averages shall be used to confirm/establish the operating limits. If the operating limits established during the test differ from the limits proposed in the permit, a permit modification application shall be submitted no later than 90 days after receiving approval of the performance test report proposing updates to the permit limits.

If test results indicate that the allowable particulate emissions standard is exceeded, a proposal for corrective action shall be submitted within 30 days after a written request from the Department.

Upon completion of the test and demonstration of compliance with the standard, operating limits shall be updated as needed and compliance will be continued through an established maintenance and operating program for the scrubber system.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 0.050 grains per dscf

Reference Test Method: Method 5

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

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

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-24: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

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Applicable Federal Requirement:40CFR 60, NSPS Subpart JJJJ

Item 2-24.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-RAYON

Process: RA1

Emission Source: GN310

Item 2-24.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Facilities that have stationary spark ignition internal combustion engines must comply with applicable portions of 40 CFR 60 Subpart JJJJ.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-25: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement:6 NYCRR 212-1.7 (a)

Item 2-25.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-RAYON

Emission Point: EP310

Regulated Contaminant(s):

CAS No: 000108-95-2 PHENOL

CAS No: 0NY998-00-0 VOC

CAS No: 0NY100-00-0 TOTAL HAP

Item 2-25.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Within 60 days after start-up, the facility was required to conduct a stack emissions test on the inlet and outlet of the thermal oxidizer (THOX2), emission point EP310, using acceptable reference methods pursuant to 6NYCRR, Part 202-1.

When the initial permit was issued on February 17, 2009, it was required that the source test would determine the control efficiency of the thermal oxidizer and emissions of carbon monoxide (CO), particulates, nitrogen oxides (NOx), sulfur compounds, hydrogen sulfide (H2S), phenol,

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benzene, styrene, polycyclic aromatic hydrogen compounds (PAH) and volatile organic compounds (VOC). Based on updated process information, it was later determined that stack testing to determine emissions of carbon monoxide, nitrogen oxides, sulfur compounds, hydrogen sulfide, phenol, benzene, styrene, and PAHs would no longer be required. However, particulates would still be evaluated using EPA Reference Method 5, and inlet and outlet total hydrocarbons concentrations would be determined using EPA Reference Method 25A. The hydrocarbon data would be used to calculate destruction removal efficiency (DRE). All hydrocarbon emissions would also be assumed to be phenol.

A stack test protocol was submitted detailing the sampling and analytical methods to be used. The inlet and outlet tests were required to consist of three separate runs using the applicable reference test methods. The protocol was to be submitted 30 days prior to the source test and was required to include the date and time of the test. The protocol was also to include details describing the operating conditions under which the test will be conducted, including but not limited to all sources venting to the THOX2 unit, production rates, and minimum oxidizer temperature. The test protocol was approved by the Department prior to testing.

The source test was required to be representative of worst case (maximum) production rates.

The initial test was performed on October 26 and November 1 and 4, 2010, and was witnessed by a representative of the Department. Plant operators were required to record the production data and process and control equipment operating conditions during the test. This data, along with temperature strip charts, was to be submitted as part of the test results. Test results were required to be submitted to the Department within 60 days after completion of the test.

The test report was sent to the Department under a cover letter from the facility dated December 31, 2010. The stack test results from three test runs indicated an average outlet emission rate of 0.040 lbs/hr of TNMHC (as Carbon). DRE was 99.991% as measured at an average THOX2 combustion temperature of 1500 degrees F. The test runs were performed with a 90,000 pound charge of material contained in 30 cans in the Sager furnace. Particulate testing resulted in a three-run average of 0.121 gr/dscf, in exceedance of the standard. The facility linked this situation to corrosion in the THOX2 stack and was subsequently required to clean the system and re-test. A

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re-test was performed June 16-17, 2011, and indicated compliance with the particulate standard, with a three-run average of 0.0056 gr/dscf.

A Method 9 opacity test was conducted concurrent with the initial performance test and showed compliance.

If future stack test results indicate emission rates greater than those used in the Part 212 analysis submitted as part of the original permit application for Ren 0 Mod 0, a revised analysis shall be submitted to the department within 60 days after the completion of the test.

If stack test results and/or a Part 212 analysis of the results indicate additional controls or limits on production are required to achieve compliance with 6NYCRR, Subpart 212-2.1(b) and Table 4 of Subpart 212-2.3(b), a permit modification including a proposal for corrective action must be submitted within 30 days from a written request from this Department.

Parameter Monitored: TOTAL HAP

Lower Permit Limit: 99 percent reduction

Reference Test Method: FRM 18 or Method 25A

Monitoring Frequency: SINGLE OCCURRENCE

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

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-26: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-1.7 (b)

Item 2-26.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-RAYON Emission Point: EP310

Regulated Contaminant(s):
 CAS No: 0NY100-00-0 TOTAL HAP
 CAS No: 0NY998-00-0 VOC

Item 2-26.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The exhaust gas temperature of the thermal oxidizer,

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THOX2, emission point EP310, is to be continuously monitored and recorded. The temperature is to be maintained and alarmed at a minimum of 1500 degrees F per the results of stack testing performed in 4th Quarter 2010.

The following is the maintenance that is to be performed on the thermal oxidizers:

1. Between runs - clean burner igniters
2. Between runs - clean burner observation ports
3. Between runs - clean flame sensors (flame rods or scanner)
4. Visually check for signs of any overheating
5. Clean blower inlet filters
6. Review last run charts for any problems
7. As needed adjust burner combustion
8. Visually check actuators and linkages
9. Check display on O2 transmitters (calibrated and ports cleaned quarterly)
10. After any adjustments or cleaning-fire up thermal oxidizer and check purge logic, low fire start, flame signal and burner stability
11. Perform yearly NFPA86 inspection for limits, burners and controls

Records of maintenance and temperature readings are to be kept on-site in a format easily accessible and made available to Department representatives on request. Records are to be kept on-site for a period of five years.

Submit a deviation report quarterly and include deviations of the temperature limit with the actual temperature, the cause, and the corrective actions.

Manufacturer Name/Model Number: Honeywell DR4500A Truline Circular Chart Recorder
Parameter Monitored: TEMPERATURE
Lower Permit Limit: 1500 degrees Fahrenheit
Monitoring Frequency: CONTINUOUS
Averaging Method: MINIMUM-NOT TO FALL BELOW EXCEPT DURING STARTUP/SHUTDOWN
Reporting Requirements: QUARTERLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 10/30/2024.
Subsequent reports are due every 3 calendar month(s).

Condition 2-27: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-2.1 (b)

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Item 2-27.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-RAYON Emission Point: EP310

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 2-27.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The emission rate of volatile organic compounds (VOC) from the sager furnace, emission point EP310, has been calculated using a maximum load of 210,000 pounds of rayon and 99.5% destruction efficiency. The emission rate potential (ERP) directed to the thermal oxidizer (THOX2) based on the volatile concentration of the rayon material is 284 pounds per hour. Since, it is unknown at this time what percentage of volatiles may be an 'A' rated contaminant such as benzene, the volatile portion will be assigned an environmental rating of 'A' and as specified in Table 4 of 6NYCRR, Subpart 212-2.3(b), a minimum of 99% control or Best Available Control Technology (BACT) will be required.

1. Thermal oxidizer THOX2 is to operate at all times that material is being processed in sager furnace.
2. The oxidizer temperature is to be maintained at a minimum of 1500 degrees F.
3. The ERP and actual emissions calculations are based on (and input will be limited to) a maximum load of 210,000 pounds and a 20% volatile portion. Stack test results indicating a greater ERP and/or a control efficiency of less than the 99.5% used to determine actual emissions will require the facility to submit revised emissions data and Part 212 analysis.
4. When the initial permit was issued on February 17, 2009, a stack test was required on both the inlet and the outlet of the oxidizer to verify the emission rate potential of benzene, phenol, and volatile organic compounds (VOC) and the degree of emissions control required by Part 212. Based on updated process information, it was later determined that a non-speciated Method 25A test method would be utilized to determine

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total hydrocarbons concentrations. All hydrocarbons would be assumed to be phenol. Stack testing was performed in 4th Quarter 2010 on a 90,000 lb load in the sager furnace.

DRE was determined to be in compliance. When the facility increases production to a full 180,000 pound load, additional stack testing will be required. If stack test results and/or a Part 212 analysis of the results indicate additional controls are required to achieve compliance with 6NYCRR, Subpart 212-2.1(b) and Table 4 of Subpart 212-2.3(b), a permit modification including a proposal for corrective action must be submitted within 30 days from a written request from this Department.

Parameter Monitored: VOC

Lower Permit Limit: 99 percent degree of air cleaning or greater

Monitoring Frequency: CONTINUOUS

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

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-28: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement:6 NYCRR 212-2.4 (b)**Item 2-28.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 1-RAYON

Emission Point: EP310

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

Item 2-28.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Particulate emissions from the thermal oxidizer (THOX2, EP310) associated with the sager furnace shall not exceed 0.050 grains per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis.

Compliance shall be demonstrated by a stack test conducted using Method 5 and using acceptable procedures as per 6NYCRR, Part 202-1 and 40 CFR Part 60. Test results shall be submitted to this Department within 60 days from the completion of the test.

Upon completion of the test and demonstration of compliance with the standard, compliance will be

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continued through an established maintenance program on the oxidizer.

Testing was carried out on THOX2 October 26 and November 1 and 4, 2010 at a production load in the sager furnace of 90,000 pounds. The test report was sent to the Department under a cover letter from the facility dated December 31, 2010. The stack test results from three test runs indicated an average outlet particulate concentration of 0.121 gr/dscf, in exceedance of the standard. The facility linked this situation to corrosion in the THOX2 stack and was subsequently required to clean the system and re-test. A re-test was performed June 16-17, 2011, and indicated compliance with the particulate standard, with a three-run average of 0.0056 gr/dscf. Within 60 days after increasing production in the sager furnace to its full production load of 180,000 pounds, facility will be required to conduct a re-test of hydrocarbon emissions from the THOX2 unit. Particulate testing may also be required upon request by the Department.

Particulate testing may also be required upon request by the Department.

Parameter Monitored: PARTICULATES
 Upper Permit Limit: 0.050 grains per dscf
 Reference Test Method: Method 5
 Monitoring Frequency: SINGLE OCCURRENCE
 Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -
 SEE MONITORING DESCRIPTION
 Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-29: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-1.7 (a)

Item 2-29.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 2-RAYON	Emission Point: 2RYTO
Process: RA2	Emission Source: VCU03

Regulated Contaminant(s):

CAS No: 000108-95-2	PHENOL
CAS No: 0NY998-00-0	VOC
CAS No: 0NY100-00-0	TOTAL HAP

Item 2-29.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

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Monitoring Description:

Within 90 days after start-up, the facility was required to conduct a stack emissions test on the inlet and outlet of the Vapor Combustion Unit, emission source VCU03, emission point 2RYTO, using acceptable reference methods pursuant to 6NYCRR, Part 202-1.

Testing shall be performed for particulates EPA Reference Method 5, and inlet and outlet total hydrocarbons concentrations would be determined using EPA Reference Method 25A. The hydrocarbon data would be used to calculate destruction removal efficiency (DRE). All hydrocarbon emissions would also be assumed to be phenol.

A protocol must be submitted at least 30 days prior to the source test and shall include the date and time of the test. The protocol will also include details describing the operating conditions under which the test will be conducted, including but not limited to all sources venting to the VCU03 unit, production rates, and the minimum combustor temperature. The test protocol shall be approved by the Department prior to testing.

The source test is required to be representative of worst case (maximum) production rates.

Test results are required to be submitted to the Department within 60 days after completion of the test.

If future stack test results indicate emission rates greater than those used in the Part 212 analysis submitted as part of permit application and supplements for Ren 1 Mod 2 (12/20/2022), a revised analysis shall be submitted to the department within 60 days after the completion of the test.

If stack test results and/or a Part 212 analysis of the results indicate additional controls or limits on production are required to achieve compliance with 6NYCRR, Subpart 212-2.1(b) and Table 4 of Subpart 212-2.3(b), a permit modification including a proposal for corrective action must be submitted within 30 days from a written request from this Department.

Parameter Monitored: TOTAL HAP

Lower Permit Limit: 90 percent reduction

Reference Test Method: FRM 18 or Method 25A

Monitoring Frequency: SINGLE OCCURRENCE

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

Permit ID: 9-2911-00381/00002

Facility DEC ID: 9291100381

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-30: Compliance Demonstration
 Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-1.7 (b)

Item 2-30.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 2-RAYON	Emission Point: 2RYTO
Process: RA2	Emission Source: VCU03

Regulated Contaminant(s):
 CAS No: 0NY100-00-0 TOTAL HAP
 CAS No: 0NY998-00-0 VOC

Item 2-30.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The exhaust gas temperature of the vapor combustion unit VCU03, emission point 2RYTO, is to be continuously monitored and recorded. The temperature is to be maintained and alarmed at a minimum of 1400 degrees F or the temperature that demonstrated compliance during the last emission test.

Preventive maintenance shall be performed as recommended by the manufacture, at a minimum, and as determined by the facility.

Records of maintenance and temperature readings are to be kept on-site in a format easily accessible and made available to Department representatives on request. Records are to be kept on-site for a period of five years.

Submit a deviation report quarterly and include deviations of the temperature limit with the actual temperature, the cause, and the corrective actions.

Manufacturer Name/Model Number: Honeywell DR4500A Truline Circular Chart Recorder

Parameter Monitored: TEMPERATURE

Lower Permit Limit: 1400 degrees Fahrenheit

Monitoring Frequency: CONTINUOUS

Averaging Method: MINIMUM-NOT TO FALL BELOW EXCEPT
 DURING STARTUP/SHUTDOWN

Reporting Requirements: QUARTERLY (CALENDAR)

Permit ID: 9-2911-00381/00002

Facility DEC ID: 9291100381

Reports due 30 days after the reporting period.
The initial report is due 10/30/2024.
Subsequent reports are due every 3 calendar month(s).

Condition 2-31: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable Federal Requirement: 6 NYCRR 212-2.1 (b)

Item 2-31.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 2-RAYON Emission Point: 2RYTO
Process: RA2 Emission Source: VCU03

Regulated Contaminant(s):
CAS No: 0NY998-00-0 VOC

Item 2-31.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The emission rate of volatile organic compounds (VOC) from the continuous rayon fabric carbonization process, process RA2, emission unit 2-RAYON, has been calculated using a 90% destruction efficiency. The emission rate potential (ERP) directed to VCU03 based on the volatile concentration of the rayon material is 19.91 pounds VOC per hour. Since, it is unknown at this time what the contaminates are, the volatile portion will be assigned an environmental rating of 'B' and as specified in Table 4 of 6NYCRR, Subpart 212-2.3(b), a minimum of 90% control. Additional information will require a reconsideration of the environmental rating and Part 212 compliance requirements.

1. Vapor Combustion Unit VCU03 is to operate at all times that material is being processed in continuous rayon fabric carbonization process.
2. The VCU03 temperature is to be maintained at a minimum of 1400 degrees F.
3. Stack test results indicating an ERP greater than (2.17 lb/hr) and/or a control efficiency of less than the 90%, which was used to determine actual emissions will require the facility to submit revised emissions data and Part 212 analysis.

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4. If stack test results and/or a Part 212 analysis of the results indicate additional controls are required to achieve compliance with 6NYCRR, Subpart 212-2.1(b) and Table 4 of Subpart 212-2.3(b), a permit modification including a proposal for corrective action must be submitted within 30 days from a written request from this Department.

Parameter Monitored: VOC

Lower Permit Limit: 90 percent degree of air cleaning or greater

Monitoring Frequency: CONTINUOUS

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

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-32: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

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

Item 2-32.1:

The Compliance Demonstration activity will be performed for:

Emission Unit: 2-RAYON

Emission Point: 2RYTO

Process: RA2

Emission Source: VCU03

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

Item 2-32.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Particulate emissions from the thermal oxidizer (ES VCU03, EP 2RTYO) associated with the continuous rayon fabric carbonization process, emission unit 2-RAYON, process 2RA, shall not exceed 0.050 grains per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis.

An emission testing protocol must be submitted at least 30 days before the scheduled test date(s).

Compliance shall be demonstrated by a stack test conducted using Method 5 and using acceptable procedures as per 6NYCRR, Part 202-1 and 40 CFR Part 60. Test results shall be submitted to this Department within 60 days from the completion of the test.

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Upon completion of the test and demonstration of compliance with the standard, compliance will be continued through an established maintenance program on the vapor combustion unit.

Particulate testing may also be required upon request by the Department.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 0.050 grains per dscf

Reference Test Method: Method 5

Monitoring Frequency: SINGLE OCCURRENCE

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

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

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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 in 6 NYCRR 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 demonstrate, 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 facility was being properly operated and maintained;

(3) during the period of the emergency the facility owner or operator took all reasonable steps to minimize the 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 any 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 malfunction 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

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with 6 NYCRR Part 616 - Public Access to Records.
 Facility owners and/or operators must submit the records required to comply with the request within sixty working days of written notification by the Department.

Item 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 2-33: Contaminant List

Effective between the dates of 08/13/2024 and 11/04/2025

Applicable State Requirement:ECL 19-0301

Replaces Condition(s) 25

Item 2-33.1:

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

CAS No: 000108-95-2
 Name: PHENOL

CAS No: 007782-50-5
 Name: CHLORINE

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

Permit ID: 9-2911-00381/00002

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CAS No: 0NY100-00-0
Name: TOTAL HAP

CAS No: 0NY998-00-0
Name: VOC

Condition 2-34: Malfunctions and start-up/shutdown activities
Effective between the dates of 08/13/2024 and 11/04/2025

Applicable State Requirement: 6 NYCRR 201-1.4

Replaces Condition(s) 26

Item 2-34.1:

(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 2-35: Malfunctions and Start-up/Shutdown Activities

Permit ID: 9-2911-00381/00002

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Effective between the dates of 08/13/2024 and 11/04/2025

Applicable State Requirement:6 NYCRR 201-1.4**Item 2-35.1:**

(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 maintenance and start-up/shutdown activities when they are expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the department when required by a permit condition or upon request by the department. Such reports shall state whether an exceedance occurred and if it was unavoidable, include the time, frequency and duration of the exceedance, 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 monitoring and quarterly reporting requirements need not submit additional reports of exceedances to the department.

(c) In the event that air contaminant emissions exceed any applicable emission standard due to a malfunction, the facility owner or operator shall 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. In addition, the facility owner or operator shall compile and maintain a record of all malfunctions. Such records shall be maintained at the facility for a period of at least five years and must be made available to the department upon request. 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, the air contaminants emitted, and the resulting emission rates and/or opacity.

(d) The department may also require the facility 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 27: Emission Unit Definition

Effective between the dates of 11/05/2015 and 11/04/2025

Applicable State Requirement:6 NYCRR Subpart 201-5**Item 27.1(From Mod 2):**

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

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Emission Unit: 1-FIBER

Emission Unit Description:

Fiberboard or other materials are carbonized and/or graphitized in the 96" and 25" furnaces. Emissions of volatile organic compounds (VOC), phenol, and hazardous air pollutants (HAP) released from these furnaces are vented to thermal oxidizer THOX1 for destruction.

As part of Permit Renewal 1, the facility installed an L&L Bake Oven, which is an electric furnace, used to remove a phenolic material that is used as an adhesive for the carbon fiber and carbonize/degas the fiber in single batch runs to 800 degrees C. In addition the L&L Bake Oven may be used to heat-treat cut coated carbon fiber pieces to an approximate temperature of 250 degrees C. The off-gas from the oven (containing phenol and VOCs) is directed to natural gas-fired thermal oxidizer THOX1 (EP 401) for destruction.

Chlorine Purification Process. As part of Permit Renewal 1 the facility installed a Chlorine Purification Process to remove metal contaminants from carbon fiber billets and cut pieces produced in other processes at the facility. Several existing induction furnaces will be modified to allow the injection of chlorine gas into the nitrogen injection system and the entry of the nitrogen and chlorine mixture into the active furnace at the appropriate point in processing to purify the carbon fiber products. The metal contaminants are removed as metal chloride salts. Off-gases from the chlorine purification process are fed to a two-stage wet scrubber system for removal of chlorine and particulates and vented through emission point EP405.

Cartridge Baghouse for Dust Removal. As part of this modification a Torit cartridge baghouse (EP 406) will be installed outside of Building #4 to control dust generated inside the building by equipment that sizes and shapes in-process carbon/graphite products, including routers, saws, mills, lathes, and sanders.

There are four emission points associated with this emission unit: EP 401-the thermal oxidizer; EP 404-natural gas fired drying ovens; EP 405- the chlorine purification process; and EP 406 - the cartridge baghouse exhaust. In addition, sixteen (16) 52" induction furnaces, three (3) 96" induction furnaces, one (1) 25" induction furnace and one (1) 33' induction furnace vent to a common header and to the thermal oxidizer stack EP 401. The wet scrubber system for the chlorine purification system vents through EP405.

As part of Renewal 1, Mod 1, a Nabertherm H3630 electric

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furnace has been installed and will be ducted to THOX1 for VOC emission control.

Building(s): 4

Item 27.2(From Mod 2):

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

Emission Unit: 1-RAYON

Emission Unit Description:

The process consists of heat treating/carbonizing rayon material in a two step heating process. The first step is to place the rayon in a natural gas fired Sager furnace (ES SAGER) at temperatures up to 800 degrees C. The second step is to carbonize/graphitize the rayon in an electric induction furnace at 1850 degrees C. Emissions from the Sager furnace are controlled by thermal oxidizer THOX2 (EP 310) . A natural-gas fired emergency generator has been added to maintain the THOX2 unit in the event of a power outage.

Building(s): 241

Item 27.3(From Mod 2):

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

Emission Unit: 2-RAYON

Emission Unit Description:

The continuous rayon fabric carbonization process begins with washing then drying the fabric in a natural gas fired drying oven. The fabric is carbonized in a series of two continuous feed electrically heated ovens. Potential emissions of hydrocarbons from the ovens will be controlled via thermal oxidation.

Building(s): 241

Condition 2-36: Compliance Demonstration

Effective between the dates of 08/13/2024 and 11/04/2025

Applicable State Requirement:6 NYCRR 201-5.1 (b)

Replaces Condition(s) 28

Item 2-36.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 2-36.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Facility shall not construct any new stationary sources or modify existing sources without first obtaining a permit modification unless the proposed changes meet the

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criteria of 6 NYCRR Sections 201-5.4(c) or (e).

If required, the facility shall submit a complete permit modification application along with the appropriate technical background data and process emissions evaluation as defined in 6 NYCRR Part 212 for each contaminant to be emitted 90 days in advance of the start-up of any proposed new source project.

FACILITY SHALL NOTIFY THIS DEPARTMENT AT THE TIME OF START-UP OF NEW OR MODIFIED OPERATIONS.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 2-37: Renewal deadlines for state facility permits
Effective between the dates of 08/13/2024 and 11/04/2025

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

Replaces Condition(s) 29

Item 2-37.1:

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 2-38: CLCPA Applicability
Effective between the dates of 08/13/2024 and 11/04/2025

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

Item 2-38.1:

Pursuant to The New York State Climate Leadership and Community Protection Act (CLCPA) and Article 75 of the Environmental Conservation Law, emission sources shall comply with regulations to be promulgated by the Department to ensure that by 2030 statewide greenhouse gas emissions are reduced by 40% of 1990 levels, and by 2050 statewide greenhouse gas emissions are reduced by 85% of 1990 levels.

Condition 2-39: Compliance Demonstration
Effective between the dates of 08/13/2024 and 11/04/2025

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

Replaces Condition(s) 30

Item 2-39.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 2-39.2:

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Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

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

Division of Air Resources
NYS Dept. of Environmental Conservation
Region 9
700 Delaware Ave.,
Buffalo, N.Y. 14209

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 5: Air pollution prohibited
Effective between the dates of 11/05/2015 and 11/04/2025

Applicable State Requirement:6 NYCRR 211.1

Item 5.1:

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 32: Emission Point Definition By Emission Unit
Effective between the dates of 11/05/2015 and 11/04/2025

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 32.1(From Mod 2):

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

Emission Unit: 1-FIBER

Emission Point: EP401
Height (ft.): 40 Diameter (in.): 36
NYTMN (km.): 4778.6 NYTME (km.): 174.9 Building: 4

Emission Point: EP404
Height (ft.): 40 Diameter (in.): 10
NYTMN (km.): 4778.6 NYTME (km.): 174.9 Building: 4

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Emission Point: EP405
 Height (ft.): 57 Diameter (in.): 6
 NYTMN (km.): 4778.6 NYTME (km.): 174.9 Building: 4

Item 32.2(From Mod 2):

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

Emission Unit: 1-RAYON

Emission Point: EP310
 Height (ft.): 48 Diameter (in.): 48
 NYTMN (km.): 4778.6 NYTME (km.): 174.9 Building: 241

Item 32.3(From Mod 2):

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

Emission Unit: 2-RAYON

Emission Point: 2RYTO
 Height (ft.): 30 Diameter (in.): 40
 NYTMN (km.): 4778.704 NYTME (km.): 174.925 Building: 241

Item 32.4(From Mod 0):

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

Emission Unit: 1-FIBER

Emission Point: EP402
 Height (ft.): 40 Diameter (in.): 10
 NYTMN (km.): 4778.6 NYTME (km.): 174.9 Building: 4

Emission Point: EP403
 Height (ft.): 40 Diameter (in.): 10
 NYTMN (km.): 4778.6 NYTME (km.): 174.9 Building: 4

Emission Point: EP406
 Height (ft.): 18 Diameter (in.): 28
 NYTMN (km.): 4778.704 NYTME (km.): 174.925 Building: 4

Condition 33: Process Definition By Emission Unit

Effective between the dates of 11/05/2015 and 11/04/2025

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 33.1(From Mod 2):

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

Emission Unit: 1-FIBER
 Process: BH1 Source Classification Code: 3-01-005-09
 Process Description:
 The cartridge type baghouse controls dust generated by

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equipment that sizes and shapes carbon/graphite in-process products, most of which undergo further processing, located in Building #4. The in-process sizing and shaping equipment includes mills, routers, saws, sanders, and lathes. Operations include the use of three vacuum ports on the baghouse to clean the floor of Building #4.

Emission Source/Control: BH001 - Control
Control Type: FABRIC FILTER

Emission Source/Control: MS001 - Process

Item 33.2(From Mod 2):

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

Emission Unit: 1-FIBER
Process: FB1 Source Classification Code: 3-01-005-09
Process Description:
At the facility, there are the following induction furnaces: Three 96", One 25", One 33" and Sixteen 52".

Emission Source/Control: THOX1 - Control
Control Type: THERMAL OXIDATION

Emission Source/Control: 25001 - Process

Emission Source/Control: 50IND - Process
Design Capacity: 600 kilowatts

Emission Source/Control: 50NEW - Process
Design Capacity: 600 kilowatts

Emission Source/Control: 96001 - Process
Design Capacity: 4,000 kilowatts

Emission Source/Control: 96002 - Process
Design Capacity: 4,000 kilowatts

Emission Source/Control: 96003 - Process
Design Capacity: 4,000 kilowatts

Emission Source/Control: 96004 - Process
Design Capacity: 4,000 kilowatts

Emission Source/Control: 96005 - Process
Design Capacity: 4,000 kilowatts

Emission Source/Control: 96006 - Process
Design Capacity: 4,000 kilowatts

Emission Source/Control: 96007 - Process
Design Capacity: 4,000 kilowatts

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Emission Source/Control: 96008 - Process
 Design Capacity: 4,000 kilowatts

Item 33.3(From Mod 2):

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

Emission Unit: 1-FIBER
 Process: FB2 Source Classification Code: 3-01-005-03
 Process Description:
 One natural gas fired drying oven used to drive off moisture from raw materials.

Emission Source/Control: ES404 - Combustion

Item 33.4(From Mod 2):

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

Emission Unit: 1-FIBER
 Process: FB3 Source Classification Code: 3-01-005-09
 Process Description:
 As part of Permit Renewal 1 the facility is installing an L&L Bake Oven, which is an electric furnace, used to remove a phenolic material that is used as an adhesive for the carbon fiber and carbonize/degas the fiber in single batch runs (approximately 200 cu. ft. of material per batch) to 800 degrees C. In addition the L&L Bake Oven may be used to heat-treat cut coated carbon fiber pieces to an approximate temperature of 250 degrees C. The off-gas from the oven (containing phenol and VOCs) will be directed to natural gas-fired thermal oxidizer THOX1 (EP 401) for destruction.

Emission Source/Control: THOX1 - Control
 Control Type: THERMAL OXIDATION

Emission Source/Control: 001LL - Process
 Design Capacity: 235 cubic feet

Item 33.5(From Mod 2):

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

Emission Unit: 1-FIBER
 Process: FB4 Source Classification Code: 3-01-007-04
 Process Description:
 Chlorine Purification Process: As part of Permit Renewal 1 the facility is installing a Chlorine Purification Process to remove metal contaminants from carbon fiber billets and cut pieces produced in other processes at the facility. Several existing induction furnaces (Three 96", One 25", One 33" and Sixteen 52") will be modified to allow the injection of chlorine gas into the nitrogen

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injection system and the entry of the nitrogen and chlorine mixture into the active furnace at the appropriate point in processing to purify the carbon fiber products. Chlorine may only be introduced into one induction furnace at any given time. The metals (such as iron, aluminum, vanadium, zinc, etc.) are removed as metal chloride salts. Prior to the introduction of chlorine, the off-gases from the furnace will be automatically switched over from exhausting into the THOX1 thermal oxidizer collection hood to exhausting into a collection hood that draws in room air and feeds through a header into a wet scrubber system. The two-stage wet scrubbing system includes a first stage packed tower scrubber using a solution of dilute NaOH and NaHSO₃ to control chlorine emissions and a second stage high energy venturi scrubber using water to control particulate emissions. Scrubbed gases will be emitted through emission point EP405.

Additional Process Information: There will be at least two methods for purifying the carbon fiber billets/pieces in the induction furnaces using chlorine. During the first method the billets are put into the active induction furnace and brought to between 1,900 and 2,000 degrees C while the off-gas is sent to thermal oxidizer THOX1 for destruction of organics. Once the furnace reaches 1,900 to 2,000 degrees C the wet scrubber system will be activated, the chlorine gas will be introduced into the system, and the billets will be purified. The second method allows for the billets to reach 2,000 degrees C (driving off organics to THOX1), the induction furnace to cool, and the billets to be removed from the furnace. The billets are then cut into customer specification pieces and coated by hand-application with either a phenolic coating or methanol coating. The cut pieces are then put back into an induction furnace and taken back up to 1,900 to 2,000 degrees C (driving off organics associated with the hand-applied coatings). When the pieces reach 1,900 to 2,000 degrees C the wet scrubber system will be activated, the chlorine gas will be introduced into the system, and the cut pieces will be purified.

Emission Source/Control: 00WS1 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS
SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00WS2 - Control
Control Type: VENTURI SCRUBBER

Emission Source/Control: 96001 - Process
Design Capacity: 4,000 kilowatts

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Item 33.6(From Mod 2):

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

Emission Unit: 1-FIBER

Process: FB5

Source Classification Code: 3-01-005-09

Process Description:

The facility will install one (1) Nabertherm H3630 Electric Furnace, which is an electric furnace, used to remove a phenolic material that is used as an adhesive for the carbon fiber and carbonize/degas the fiber in single batch runs to 1,340 degrees Celsius. In addition, the H3630 Furnace is (46" x 88" x 48") in size where the product will be carbonized in the production zone. Also, the furnace may be used to heat treat cut coated carbon fiber pieces to an approximate temperature of 250 degrees Celsius. The material loaded into the oven may at times be contained in a covered can, similar to how the process in Furnace 310 is conducted. The oven process is slated for use about 1 or 2 times/batches per week (turnaround time is about 96 hours per batch at 1,300 degrees Celsius or 24 hours at 250 degrees Celsius). The off-gas from the oven will be ducted to THOX1 for destruction. Only about 88 pounds of phenolic/VOCs is expected to off-gas per batch when operated at capacity.

Emission Source/Control: H3630 - Combustion

Design Capacity: 112 cubic feet

Emission Source/Control: THOX1 - Control

Control Type: THERMAL OXIDATION

Item 33.7(From Mod 2):

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

Emission Unit: 1-RAYON

Process: RA1

Source Classification Code: 3-01-005-03

Process Description:

1-RAYON involves the carbonizing of fabric material and carbon paper in a one-step batch process in the Sager furnace. It also includes an electrically heated continuous feed furnace (ES ABBOT) to carbonize carbon paper. The paper may first be treated in the prepreg ovens (ES PPREG, ES PPRG2). Potential emissions from the batch process are controlled by THOX2. Potential emissions from the continuous feed process will be controlled by VCU03.

Emission Source/Control: GN310 - Combustion

Design Capacity: 85 kilowatts

Emission Source/Control: PPREG - Combustion

Design Capacity: 3 million Btu per hour

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Emission Source/Control: PPRG2 - Combustion
 Design Capacity: 1.6 million Btu per hour

Emission Source/Control: THOX2 - Control
 Control Type: THERMAL OXIDATION

Emission Source/Control: ABBOT - Process
 Design Capacity: 11 feet per minute

Emission Source/Control: SAGER - Process

Item 33.8(From Mod 2):

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

Emission Unit: 2-RAYON

Process: RA2

Source Classification Code: 3-01-005-03

Process Description:

The continuous rayon fabric carbonization process begins with washing then drying the fabric in a continuous 3 MMBtu/hr natural gas fired oven (ES RYDRY). The fabric will then be carbonized in a series of two electrically heated continuous belt furnaces (ES RYCN1, and ES RYCN2).

Emission Source/Control: RYDRY - Combustion
 Design Capacity: 3 million Btu per hour

Emission Source/Control: VCU03 - Control
 Control Type: VAPOR COMBUSTION SYSTEM (INCL VAPOR COLLECTION AND COMBUSTION UNIT)

Emission Source/Control: RYCN1 - Process
 Design Capacity: 360 feet per minute

Emission Source/Control: RYCN2 - Process
 Design Capacity: 360 feet per minute

Item 33.9(From Mod 1):

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

Emission Unit: 1-FINIS

Process: BH2

Process Description:

The cartridge type baghouse controls dust generated by finishing equipment that sizes and shapes carbon/graphite products, located in Building #5. The finishing sizing and shaping equipment includes mills, sifters, and saws.

Emission Source/Control: BH002 - Control
 Control Type: FABRIC FILTER

Emission Source/Control: MILL1 - Process

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