Facility DEC ID: 9290900045

PERMIT
Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Air State Facility
Permit ID: 9-2909-00045/02001
Effective Date: 02/12/2021 Expiration Date: 02/11/2026

Permit Issued To:TWIN LAKE CHEMICAL INC
520 MILL ST
PO BOX 411
LOCKPORT, NY 14094-0411

Contact: JAMES D HODAN
TWIN LAKE CHEMICAL INC
PO BOX 411
LOCKPORT, NY 14095
(716) 433-3824

Facility: TWIN LAKE CHEMICAL INC
520 MILL ST
LOCKPORT, NY 14094

Contact: WILLIAM CASWELL
TWIN LAKE CHEMICAL INC
520 MILL ST
LOCKPORT, NY 14094-1712
(716) 433-3824

Description:
This Air State Facility permit incorporates monitoring conditions for Twin Lake Chemical located in Lockport, New York. The facility, utilizing nine batch reactors and eight scrubbers housed in two main production buildings, manufactures various organic acid chlorides used as intermediaries in the production of other compounds. The primary products are trimellitic trichloride, trimellitic anhydride monoacid chloride, isophthaloyl chloride, orthophthaloyl chloride, terephthaloyl chloride, and phosphorous pentachloride.

The facility's processes are subject to 6NYCRR Part 212, specifically the particulate grain loading standard and the percent control requirement for gaseous contaminants, including phosgene and chloroform which are classified as highly toxic air contaminants (HTAC) and three hazardous air pollutants (HAP) - phthalic anhydride, chloromethane, and chlorine. Other air contaminants include hydrogen chloride, dichloromethane, trimellitic anhydride and phosphorous pentachloride.

Compliance with Part 212 was demonstrated for all air contaminants. Actual emissions of the two HTACs – phosgene and chloroform – are less than their mass emission limits of 500 and 100 pounds per year, respectively, per §212-2.2 Table 2. All air contaminant emissions, including phosgene and chloroform, were evaluated using the Aerscreen air dispersion modeling program and per the procedures detailed in the guidance document *DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants under Part 212*. All expected impacts on a potential-to-emit basis, as compared to the allowable short-term and annual guideline concentrations, were determined to be in compliance with Part 212 requirements. The operation of two scrubbers in series (emission sources 00012 and 00016) is required to maintain compliance with the trimellitic anhydride short-term guideline concentration.

Raw materials are added to the batch reactors along with a chlorinating agent and a catalyst. Phosgene and thionyl chloride are used as chlorinating agents. Phosgene is purchased in 1-ton containers from Vandemark Chemical, located next door to the facility. Reactors are under slight positive pressure during the batch reaction phase. Reactor temperatures are monitored to determine reaction completion at which time the liquid product is transferred to a distillation unit for refinement and separation. Air strippers remove chlorinated hydrocarbons from wastewater prior to discharge to the City of Lockport wastewater treatment plant. The wastewater is generated as condensate from the steam eductor vacuum system associated with the distillation process. Wastewater is continuously sampled for pH. Still bottoms are transferred off-site.

Gases which remain in a reactor from the previous batch are removed under vacuum from a reactor prior to it being opened for the addition of chemicals for the next batch. The gases are sent to scrubbers associated with the various reactor. Packed tower scrubbers are utilized to remove acid gases and have a gravitational type of orifice distributor which consists of flat trays with several risers for vapor flow and perforations in the tray floor for liquid flow. Venturi scrubbers are used to control particulate emissions from the addition of dry materials to the reactors. Gas flow from the phosgene and thionyl scrubbers is directed to a finishing scrubber (emission point 00020) containing 6% caustic before being vented to atmosphere. An emergency scrubber located in the 1-ton phosgene cylinder area has an automatic interlock to respond to a

phosgene concentration of 0.25 ppm.

Four perimeter alarms at the fence line have detection limits of 0.5 ppm.

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified and any Special Conditions included as part of this permit.

Permit Administrator: LISA M CZECHOWICZ
NYSDEC - REGION 9
270 MICHIGAN AVE
BUFFALO, NY 14203-2915

Authorized Signature: _____ Date: ___ / ___ / _____

Notification of Other State Permittee Obligations

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the compliance permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in any compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

PAGE LOCATION OF CONDITIONS

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

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

Item 1.1:
The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

Item 1.2:
The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

Item 1.3:
A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

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

Item 2.1:
Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

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

Item 3.1:
The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

Item3.2:
The permittee must submit a renewal application at least 180 days before the expiration of permits for Title V and State Facility Permits.

Item 3.3
Permits are transferrable with the approval of the department unless specifically prohibited by the statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

Facility DEC ID: 9290900045

Condition 4: Permit modifications, suspensions or revocations by the Department
Applicable State Requirement: 6 NYCRR 621.13

Item 4.1:
The Department reserves the right to exercise all available authority to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification, suspension or revocation include:

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

****** Facility Level ******

Condition 5: Submission of application for permit modification or renewal-REGION 9 HEADQUARTERS
Applicable State Requirement: 6 NYCRR 621.6 (a)

Item 5.1:
Submission of applications for permit modification or renewal are to be submitted to:
NYSDEC Regional Permit Administrator
Region 9 Headquarters
Division of Environmental Permits
270 Michigan Avenue
Buffalo, NY 14203-2915
(716) 851-7165

Permit ID: 9-2909-00045/02001 **Facility DEC ID: 9290900045**

Permit Under the Environmental Conservation Law (ECL)

ARTICLE 19: AIR POLLUTION CONTROL - AIR STATE FACILITY PERMIT

IDENTIFICATION INFORMATION

Permit Issued To:TWIN LAKE CHEMICAL INC
520 MILL ST
PO BOX 411
LOCKPORT, NY 14094-0411

Facility: TWIN LAKE CHEMICAL INC
520 MILL ST
LOCKPORT, NY 14094

Authorized Activity By Standard Industrial Classification Code:
2819 - INDUSTRIAL INORGANIC CHEMICALS
2869 - INDUSTRIAL ORGANIC CHEMICALS,NEC

Permit Effective Date: 02/12/2021 Permit Expiration Date: 02/11/2026

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Emission Unit Level

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54 46 6 NYCRR Subpart 201-5: Process Definition By Emission Unit

FEDERALLY ENFORCEABLE CONDITIONS

Renewal 1/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,

required to operate such device effectively.

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

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

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

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

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

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

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

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

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

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

Item H: Proof of Eligibility for Sources Defined as Trivial

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)

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: Maintenance of Equipment
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable Federal Requirement:6 NYCRR 200.7

Item 1.1:
Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

Condition 2: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable Federal Requirement:6 NYCRR 200.7

Item 2.1:
The Compliance Demonstration activity will be performed for the Facility.

Item 2.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Preventative Maintenance Plan:

All equipment will undergo periodic and preventative maintenance as detailed in the facility's Preventative Maintenance Plan, dated November 2014. If the Plan is updated due to equipment or permitting changes, a copy of the updated version of the Plan must be submitted to the Regional Air Pollution Control Engineer within 30 days of completion. Each permit renewal application must contain a

copy of the current version of the Plan.

The Plan details activities to be taken on a daily, weekly, monthly, semi-annual, and annual basis for each specific piece of process and control equipment.

The daily preventative maintenance for each packed tower scrubber shall include, at a minimum, inspection and recording of:
a. visible liquid leaks,
b. system gas leaks,
c. abrasion, corrosion or buildup on fans, ducts, pipes, and
d. caustic flow.

Annually, each packed tower scrubber shall be internally inspected for signs of:
1. corrosion and erosion,
2. solids deposits in packed beds or tray orifices,
3. solids accumulation in mist eliminators, and
4. worn packing.
If any of these conditions exist, appropriate remediation measures must be undertaken within 24 hours.

Annually, all process equipment shall be maintained as follows:
1. Emergency shutdown system shall be inspected and tested.
2. Temperature instrumentation shall be calibrated for all reactors.
3. Pressure instrumentation shall be inspected and tested.
4. Pumps will be broken down and inspected for wear.
5. Process piping and components will be emptied and disassembled at random locations. Pipes will be visually inspected as well as measured for wall thickness. Valves will be inspected and tested for positive shut-off as well as for erosion and corrosion. Lines will be pressure checked. Pipe joints will be checked using soap and water.
6. Pressure relief devices shall cleaned and inspected for signs of wear and corrosion. They shall be tested to 75% of rupture pressure.

An annual report detailing all deviations from normal operating ranges and malfunctions (or if none occurred, a statement to that effect) must be submitted to the Regional Air Pollution Control Engineer (RAPCE) by January 30th for the prior calendar year.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2022.
Subsequent reports are due every 12 calendar month(s).

Condition 3: Visible Emissions Limited
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable Federal Requirement:6 NYCRR 211.2

Item 3.1:
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 4: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 4.1:
The Compliance Demonstration activity will be performed for the Facility.

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

Item 4.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
Facility owner or operator shall not cause or allow emissions having an average opacity of 20 percent or greater for any consecutive six-minute period from any emission source subject to 6 NYCRR Part 212 into the outdoor atmosphere. The facility owner or operator will observe all emission points visible from ground level within the boundaries of the facility at least once each operating day during daylight hours. Should any visible emissions appear, the facility owner or operator shall determine the cause and immediately make the necessary correction(s).

These observations will be recorded in a log book at the facility and shall be made available to the Department upon request. Records will be maintained for a minimum of 5 years.

If after corrections are made and any emissions continue

to be observed, the facility owner or operator will conduct a Method 9 assessment to determine the degree of opacity. The facility owner or operator will notify the DEC immediately if the Method 9 test indicates that the opacity standard is not met.

The Department reserves the right to perform or require the performance of a Method 9 opacity evaluation at any time during facility operation to determine compliance with the above opacity limit.

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 5: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 5.1:
The Compliance Demonstration activity will be performed for the Facility.

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

Item 5.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Twin Lake Chemical shall comply with the degree of cleaning requirements specified under 6NYCRR 212-2.3(a) Table 3 for sulfur dioxide (S02). The Department has assigned an environmental rating (ER) of “B” per 6NYCRR Part 212 to SO2. For the documented SO2 emission rate potential (ERP) of 1.22 pounds per hour, Table 3 sets the degree of required air cleaning at a level at which air dispersion modeling can demonstrate that the maximum offsite air concentration is less than the SO2 National Ambient Air Quality Standard (NAAQS).

SO2 emissions were modeled using the Aerscreen air dispersion modeling program and the procedures detailed in DAR-1 on a potential-to-emit (PTE) basis. The maximum offsite atmospheric impacts predicted by the model were compared to the SO2 NAAQS and were determined to comply with Part 212 control requirements. Continued compliance will be assured by surrogate parametric monitoring which

is detailed in other monitoring conditions in this permit under a Part 212-2.1 citation.

Prior to any change in operational parameters which could cause an increase in the SO2 PTE, the impacts associated with the planned increase in emissions must be re-evaluated and reported to the Regional Air Pollution Control Engineer.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 6: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 6.1:
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 000100-21-0	1,4-BENZENEDICARBOXYLIC ACID
CAS No: 000121-91-5	1, 3-BENZENEDICARBOXYLIC ACID
CAS No: 007719-12-2	PHOSPHOROUS TRICHLORIDE
CAS No: 010026-13-8	PHOSPHORANE, PENTACHLORO- CL5P
CAS No: 000085-44-9	1,3-ISOBENZOFURANDIONE

Item 6.2:
Compliance Demonstration shall include the following monitoring:

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

Twin Lake Chemical shall comply with the particulate grain loading standard specified in 6NYCRR 212-2.4(b) for five individual particulate matter (PM) compounds:

- phthalic anhydride (aka 1,3-isobenzofurandione),
- isophthalic acid (aka 1,3-benzenedicarboxylic acid),
- terephthalic acid (aka 1,4-benzenedicarboxylic acid),

- phosphorous trichloride, and
- phosphorous pentachloride (aka phosphorane, pentachloro – CL5P)

Per Section E.1. of the NYSDEC guidance document DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants under Part 212, solid PM can be controlled as a family using the grain loading standard if assigned an environmental rating (ER) of “B” or “C”, but should first be evaluated for the individual components that make up

the solid PM.

To evaluate the individual PM components, the Department assigned an ER of "B" to the five contaminants noted above. For the documented phthalic anhydride, phosphorous pentachloride, and phosphorous trichloride emission rate potentials (ERP) of 2.2, 1.1, and 0.75 pounds per hour, respectively, Table 3 sets the degree of required air cleaning at a level at which air dispersion modeling can demonstrate that the maximum offsite air concentration is less than the applicable short-term (SGC) and annual (AGC) guideline concentrations found in DAR-1. For the documented isophthalic acid and terephthalic acid ERP of 13.2 pounds per hour, Table 3 sets the degree of required air cleaning at 90%.

Emissions of each of the five contaminants were modeled using the Aerscreen air dispersion modeling program and the procedures detailed in DAR-1 on a potential-to-emit (PTE) basis. The maximum offsite atmospheric impacts predicted by the model were compared to the SGCs and AGCs for each chemical and were determined to comply with Part 212 control requirements. Additionally, the facility-documented control efficiency for isophthalic acid and terephthalic acid is 99.4% which exceeds the minimum required 90% control degree of air cleaning.

Continued compliance will be assured by surrogate parametric monitoring which is detailed in other monitoring conditions in this permit under a Part 212-2.4(b) citation.

Prior to any change in operational parameters which could cause an increase in the PTE of any one of the five contaminants, the impacts associated with the planned increase in emissions must be re-evaluated and reported to the Regional Air Pollution Control Engineer.

Parameter Monitored: PARTICULATES
Upper Permit Limit: 0.05 grains per dscf
Monitoring Frequency: UPON REQUEST OF REGULATORY AGENCY
Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME (INSTANTANEOUS/DISCRETE OR GRAB)
Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 7: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable Federal Requirement:40CFR 63.6603(a), Subpart ZZZZ

Item 7.1:

The Compliance Demonstration activity will be performed for the Facility.

Item 7.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:

The owner or operator of an existing emergency and black start compression ignition stationary RICE located at an area source of HAP emissions must comply with the following maintenance procedures:

(1) Change oil and filter every 500 hours of operation or annually, whichever comes first;
(2) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;
(3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

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

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

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 8: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable Federal Requirement:40CFR 63.6625(f), Subpart ZZZZ

Item 8.1:
The Compliance Demonstration activity will be performed for the Facility.

Item 8.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:

Owners or operators of an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, must install a non-resettable

hour meter if one is not already installed.

Monitoring Frequency: UPON REQUEST OF REGULATORY AGENCY
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 9: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable Federal Requirement:40CFR 63.6640(f), Subpart ZZZZ

Item 9.1:
The Compliance Demonstration activity will be performed for the Facility.

Item 9.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:

The owner or operator of an emergency stationary RICE must operate the emergency stationary RICE according to the requirements in 40 CFR 63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under subpart ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 63.6640(f)(1) through (4), is prohibited. If the owner or operator does not operate the engine according to the requirements in 40 CFR 63.6640(f)(1) through (4), the engine will not be considered an emergency engine under subpart ZZZZ and must meet all requirements for non-emergency engines.

Monitoring Frequency: UPON REQUEST OF REGULATORY AGENCY
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

STATE ONLY ENFORCEABLE CONDITIONS
****** Facility Level ******

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS
This section contains terms and conditions which are not federally enforceable. Permittees may also have other obligations under regulations of general applicability

Item A: Emergency Defense - 6 NYCRR 201-1.5

An emergency, as defined by subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the Department for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the facility owner or operator can identify the cause(s) of the emergency;
(2) The equipment at the permitted facility causing the emergency was at the time being properly operated and maintained;
(3) During the period of the emergency the facility owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
(4) The facility owner or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

Item B: **Public Access to Recordkeeping for Facilities With State Facility Permits - 6 NYCRR 201-1.10 (a)**
Where facility owners and/or operators keep records pursuant to compliance with the requirements of 6 NYCRR Subpart 201-5.4, and/or the emission capping requirements of 6 NYCRR Subpart 201-7, the Department will make such records available to the public upon request in accordance with 6 NYCRR Part 616 - Public Access to Records.

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 10: Contaminant List
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:ECL 19-0301

Item 10.1:
Emissions of the following contaminants are subject to contaminant specific requirements in this permit(emission limits, control requirements or compliance monitoring conditions).

CAS No: 000067-66-3
Name: CHLOROFORM

CAS No: 000074-87-3
Name: METHYL CHLORIDE

CAS No: 000075-09-2
Name: DICHLOROMETHANE

CAS No: 000075-44-5

Name: PHOSGENE

CAS No: 000085-44-9
Name: 1,3-ISOBENZOFURANDIONE

CAS No: 000100-21-0
Name: 1,4-BENZENEDICARBOXYLIC ACID

CAS No: 000121-91-5
Name: 1, 3-BENZENEDICARBOXYLIC ACID

CAS No: 000552-30-7
Name: TRIMELLITIC ANHYDRIDE

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

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

CAS No: 007719-09-7
Name: THIONYL CHLORIDE

CAS No: 007719-12-2
Name: PHOSPHOROUS TRICHLORIDE

CAS No: 007719-12-2
Name: PHOSPHORUS TRICHLORIDE

CAS No: 007782-50-5
Name: CHLORINE

CAS No: 010026-13-8
Name: PHOSPHORANE, PENTACHLORO- CL5P

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

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

Condition 11: Malfunctions and Start-up/Shutdown Activities
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 201-1.4

Item 11.1:
(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 exceedence occurred and if it was unavoidable, include the time, frequency and duration of the exceedence, 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 exceedences 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 12: Emission Unit Definition
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 12.1:
The facility is authorized to perform regulated processes under this permit for:
Emission Unit: 0-00001
Emission Unit Description:
Production of acid chlorides utilizing phosgene, thionyl chloride, and phosphorous trichloride. Emissions from batch reactors are vented to packed caustic scrubbers.

Building(s): Bldg 1
Bldg 2
Bldg 23
Bldg 4

Condition 13: Renewal deadlines for state facility permits

Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 13.1:
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 14: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 14.1:
The Compliance Demonstration activity will be performed for the Facility.

Item 14.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Any reports or submissions required by this permit shall be submitted to the Regional Air Pollution Control Engineer (RAPCE) at the following address:

Division of Air Resources
NYS Dept. of Environmental Conservation
Region 9
270 Michigan Ave.
Buffalo, NY 14203

Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2022.
Subsequent reports are due every 12 calendar month(s).

Condition 15: Air pollution prohibited
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 211.1

Item 15.1:
No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.

Condition 16: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 16.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 100 Emission Source: 00016

Emission Unit: 0-00001
Process: 101 Emission Source: 00016

Emission Unit: 0-00001
Process: 102 Emission Source: 00016

Emission Unit: 0-00001
Process: 103 Emission Source: 00016

Emission Unit: 0-00001
Process: 104 Emission Source: 00016

Emission Unit: 0-00001
Process: 105 Emission Source: 00016

Emission Unit: 0-00001
Process: 106 Emission Source: 00016

Regulated Contaminant(s):

CAS No: 000085-44-9	1,3-ISOBENZOFURANDIONE
CAS No: 000121-91-5	1, 3-BENZENEDICARBOXYLIC ACID
CAS No: 000552-30-7	TRIMELLITIC ANHYDRIDE
CAS No: 007782-50-5	CHLORINE
CAS No: 010026-13-8	PHOSPHORANE, PENTACHLORO- CL5P
CAS No: 007719-12-2	PHOSPHORUS TRICHLORIDE
CAS No: 000100-21-0	1,4-BENZENEDICARBOXYLIC ACID

Item 16.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
The Building 2 venturi/packed tower scrubber (emission source 00016) shall operate with a minimum caustic scrubber liquid flow rate of 17 gallons per minute (gpm) into the packed tower portion of the unit. The flow rate will be monitored and recorded once every 30 minutes while operating.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: FLOW RATE
Lower Permit Limit: 17 gallons per minute
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 17: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 17.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 100 Emission Source: 00016

Emission Unit: 0-00001
Process: 101 Emission Source: 00016

Emission Unit: 0-00001
Process: 102 Emission Source: 00016

Emission Unit: 0-00001
Process: 103 Emission Source: 00016

Emission Unit: 0-00001
Process: 104 Emission Source: 00016

Emission Unit: 0-00001
Process: 105 Emission Source: 00016

Emission Unit: 0-00001
Process: 106 Emission Source: 00016

Regulated Contaminant(s):

CAS No: 000085-44-9	1,3-ISOBENZOFURANDIONE
CAS No: 000121-91-5	1, 3-BENZENEDICARBOXYLIC ACID
CAS No: 000552-30-7	TRIMELLITIC ANHYDRIDE
CAS No: 007782-50-5	CHLORINE
CAS No: 010026-13-8	PHOSPHORANE, PENTACHLORO- CL5P
CAS No: 007719-12-2	PHOSPHORUS TRICHLORIDE
CAS No: 000100-21-0	1,4-BENZENEDICARBOXYLIC ACID

Item 17.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
The Building 2 venturi/packed tower scrubber (emission source 00016) shall operate with a minimum liquid flow rate of 125 gallons per minute (gpm) into the jet venturi portion of the unit. The flow rate will be monitored and recorded once every 30 minutes while operating.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request. Records must be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: FLOW RATE
Lower Permit Limit: 125 gallons per minute
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 18: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 18.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001

Process: 100 Emission Source: 00012

Emission Unit: 0-00001
Process: 100 Emission Source: 00016

Emission Unit: 0-00001
Process: 101 Emission Source: 00012

Emission Unit: 0-00001
Process: 101 Emission Source: 00016

Emission Unit: 0-00001
Process: 102 Emission Source: 00012

Emission Unit: 0-00001
Process: 102 Emission Source: 00016

Emission Unit: 0-00001
Process: 103 Emission Source: 00016

Emission Unit: 0-00001
Process: 104 Emission Source: 00016

Emission Unit: 0-00001
Process: 105 Emission Source: 00016

Emission Unit: 0-00001
Process: 106 Emission Source: 00012

Emission Unit: 0-00001
Process: 106 Emission Source: 00016

Regulated Contaminant(s):

CAS No: 000085-44-9	1,3-ISOBENZOFURANDIONE
CAS No: 000121-91-5	1, 3-BENZENEDICARBOXYLIC ACID
CAS No: 000552-30-7	TRIMELLITIC ANHYDRIDE
CAS No: 007719-12-2	PHOSPHOROUS TRICHLORIDE
CAS No: 007782-50-5	CHLORINE
CAS No: 010026-13-8	PHOSPHORANE, PENTACHLORO- CL5P
CAS No: 000100-21-0	1,4-BENZENEDICARBOXYLIC ACID

Item 18.2:
Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:
The Building 1 and Building 2 venturi/packed tower scrubbers (emission sources 000012 & 00016) shall operate with a minimum pressure of 80 psig at the liquid inlet to the jet venturi portion of the scrubbers. The pressures will be monitored and recorded once every 30 minutes while

operating. Records must be maintained onsite and be readily available upon request.

The scrubbers and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: PRESSURE
Lower Permit Limit: 80 pounds per square inch gauge
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 19: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 19.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 100 Emission Source: 00016

Emission Unit: 0-00001
Process: 101 Emission Source: 00016

Emission Unit: 0-00001
Process: 102 Emission Source: 00016

Emission Unit: 0-00001
Process: 103 Emission Source: 00016

Emission Unit: 0-00001
Process: 104 Emission Source: 00016

Emission Unit: 0-00001
Process: 105 Emission Source: 00016

Emission Unit: 0-00001
Process: 106 Emission Source: 00016

Regulated Contaminant(s):

CAS No: 000085-44-9	1,3-ISOBENZOFURANDIONE
CAS No: 000121-91-5	1, 3-BENZENEDICARBOXYLIC ACID
CAS No: 000552-30-7	TRIMELLITIC ANHYDRIDE
CAS No: 007782-50-5	CHLORINE
CAS No: 010026-13-8	PHOSPHORANE, PENTACHLORO- CL5P
CAS No: 007719-12-2	PHOSPHORUS TRICHLORIDE
CAS No: 000100-21-0	1,4-BENZENEDICARBOXYLIC ACID

Item 19.2:
Compliance Demonstration shall include the following monitoring:

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

The Building 2 venturi/packed tower scrubber (emission source 00016) shall operate with a minimum pressure at the liquid inlet to the packed tower of 4 psig. The pressure will be monitored and recorded once every 30 minutes while operating. Records must be maintained onsite and be readily available upon request.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: PRESSURE
Lower Permit Limit: 4 pounds per square inch gauge
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 20: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 20.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001 Emission Point: 00020
Process: 100 Emission Source: 00020

Emission Unit: 0-00001
Process: 101 Emission Source: 00010

Emission Unit: 0-00001
Process: 102 Emission Source: 00010

Emission Unit: 0-00001 Emission Point: 00020
Process: 102 Emission Source: 00020

Emission Unit: 0-00001
Process: 103 Emission Source: 00014

Emission Unit: 0-00001 Emission Point: 00020
Process: 103 Emission Source: 00020

Emission Unit: 0-00001
Process: 104 Emission Source: 00014

Regulated Contaminant(s):

CAS No: 007446-09-5	SULFUR DIOXIDE
CAS No: 007647-01-0	HYDROGEN CHLORIDE
CAS No: 007719-09-7	THIONYL CHLORIDE
CAS No: 000075-44-5	PHOSGENE

Item 20.2:
Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The finishing scrubber (emission source 00020) and the two phosgene scrubbers (emission sources 00010 & 00014) shall operate with a minimum caustic scrubber liquid flow rate of 60 gallons per minute (gpm). The flow rate will be monitored and recorded once every four operating hours.

The scrubbers and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: FLOW RATE
Lower Permit Limit: 60 gallons per minute
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 21: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 21.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 100 Emission Source: 00012

Emission Unit: 0-00001
Process: 101 Emission Source: 00012

Emission Unit: 0-00001
Process: 102 Emission Source: 00012

Emission Unit: 0-00001
Process: 106 Emission Source: 00012

Regulated Contaminant(s):
CAS No: 000552-30-7 TRIMELLITIC ANHYDRIDE
CAS No: 000100-21-0 1,4-BENZENEDICARBOXYLIC ACID

Item 21.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
The Building 1 venturi/packed tower scrubber (emission source 00012) shall operate with a minimum caustic scrubber liquid flow rate of 11 gallons per minute (gpm) into the packed tower portion of the unit. The flow rate will be monitored and recorded once every 30 minutes while operating.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: FLOW RATE
Lower Permit Limit: 11 gallons per minute
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 22: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 22.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 100 Emission Source: 00012

Emission Unit: 0-00001
Process: 101 Emission Source: 00012

Emission Unit: 0-00001
Process: 102 Emission Source: 00012

Emission Unit: 0-00001
Process: 106 Emission Source: 00012

Regulated Contaminant(s):
CAS No: 000552-30-7 TRIMELLITIC ANHYDRIDE
CAS No: 000100-21-0 1,4-BENZENEDICARBOXYLIC ACID

Item 22.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
The Building 1 venturi/packed tower scrubber (emission source 00012) shall operate with a minimum pressure at the liquid inlet to the packed tower of 6 psig. The pressure will be monitored and recorded once every 30 minutes while operating. Records must be maintained onsite and be readily available upon request.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: PRESSURE
Lower Permit Limit: 6 pounds per square inch gauge
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 23: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 23.1:
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 007446-09-5	SULFUR DIOXIDE
CAS No: 007647-01-0	HYDROGEN CHLORIDE
CAS No: 007719-09-7	THIONYL CHLORIDE
CAS No: 000075-44-5	PHOSGENE

Item 23.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
The level of scrubber liquor within the caustic feed tank which feeds the finishing scrubber (emission source 00020) shall not be less than 140 gallons. A visual check of the fill line via a sight glass will be performed once every four hours during operation to ascertain and document the acceptability of the fill level.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: SODIUM HYDROXIDE
Lower Permit Limit: 140 gallons
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 24: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 24.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 100 Emission Source: 00011

Regulated Contaminant(s):
CAS No: 007719-09-7 THIONYL CHLORIDE
CAS No: 007446-09-5 SULFUR DIOXIDE

Item 24.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
Thionyl scrubber #1 (emission source 00011) shall operate with a minimum caustic scrubber liquid flow rate of 18 gallons per minute (gpm). The flow rate will be monitored and recorded once every 30 minutes while operating.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be

maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: FLOW RATE
Lower Permit Limit: 18 gallons per minute
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 25: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 25.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001 Emission Point: 00020
Process: 100 Emission Source: 00015

Emission Unit: 0-00001 Emission Point: 00020
Process: 100 Emission Source: 00020

Regulated Contaminant(s):
CAS No: 007647-01-0 HYDROGEN CHLORIDE
CAS No: 007719-09-7 THIONYL CHLORIDE
CAS No: 007446-09-5 SULFUR DIOXIDE

Item 25.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
Thionyl scrubber #2 (emission source 00015) shall operate with a minimum caustic scrubber liquid flow rate of 50 gallons per minute (gpm). The flow rate will be monitored and recorded once every 30 minutes while operating.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be

maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: FLOW RATE
Lower Permit Limit: 50 gallons per minute
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 26: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 26.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 100 Emission Source: 00012

Emission Unit: 0-00001
Process: 101 Emission Source: 00012

Emission Unit: 0-00001
Process: 102 Emission Source: 00012

Emission Unit: 0-00001
Process: 106 Emission Source: 00012

Regulated Contaminant(s):
CAS No: 000552-30-7 TRIMELLITIC ANHYDRIDE
CAS No: 000100-21-0 1,4-BENZENEDICARBOXYLIC ACID

Item 26.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
The Building 1 venturi/packed tower scrubber (emission source 00012) shall operate with a minimum liquid flow rate of 85 gallons per minute (gpm) into the jet venturi portion of the unit. The flow rate will be monitored and recorded once every 30 minutes while operating.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary

parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request. Records must be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: FLOW RATE
Lower Permit Limit: 85 gallons per minute
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 27: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 27.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 100 Emission Source: 00011

Emission Unit: 0-00001
Process: 100 Emission Source: 00015

Emission Unit: 0-00001
Process: 101 Emission Source: 00010

Emission Unit: 0-00001
Process: 102 Emission Source: 00010

Emission Unit: 0-00001
Process: 103 Emission Source: 00014

Emission Unit: 0-00001
Process: 104 Emission Source: 00014

Regulated Contaminant(s):
CAS No: 007446-09-5 SULFUR DIOXIDE
CAS No: 007647-01-0 HYDROGEN CHLORIDE
CAS No: 007719-09-7 THIONYL CHLORIDE
CAS No: 000075-44-5 PHOSGENE

Item 27.2:

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The phosgene scrubbers (emission sources 00010 & 00014) and the thionyl scrubbers (emission sources 00011 & 00015) shall be operated with a scrubber solution with a minimum pH of 8.5 units.

The scrubber liquid pH shall be measured using a pH sensor at the outlet of the scrubber. To verify that the scrubbing system is operating properly, the pH of the scrubber solution shall be monitored and recorded every 30 minutes during operation.

Sodium hydroxide (NaOH) in the scrubber liquid is depleted during the scrubbing process, therefore the efficacy of the wet scrubber liquid to remove the known acid gas contaminants (hydrogen chloride, sulfur dioxide, thionyl chloride and phosgene) from the gas stream is dependent on the concentration of NaOH in the scrubber liquid. NaOH in the scrubber liquid must be maintained at the design concentration to ensure 99.5% removal efficiency. Monitoring scrubber liquid pH should be an adequate surrogate for the NaOH design concentration of scrubber liquid at the outlet for a wet scrubber used to control acid gas emissions.

The scrubbers and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: PH
Lower Permit Limit: 8.5 pH (STANDARD) units
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 28: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 28.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001 Emission Point: 00020
Process: 100 Emission Source: 00020

Emission Unit: 0-00001 Emission Point: 00020
Process: 102 Emission Source: 00020

Emission Unit: 0-00001 Emission Point: 00020
Process: 103 Emission Source: 00020

Regulated Contaminant(s):
CAS No: 007446-09-5 SULFUR DIOXIDE
CAS No: 007647-01-0 HYDROGEN CHLORIDE
CAS No: 007719-09-7 THIONYL CHLORIDE
CAS No: 000075-44-5 PHOSGENE

Item 28.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
The finishing scrubber (emission source 00020) shall operate with a minimum sodium hydroxide (NaOH) concentration of 3 percent. The NaOH concentration will be measured by a two-stage acid/base titration and recorded once every four operating hours.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: SODIUM HYDROXIDE
Lower Permit Limit: 3 percent
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 29: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.1

Item 29.1:
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 000075-09-2 DICHLOROMETHANE

Item 29.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Facility emissions of dichloromethane are in compliance with 6NYCRR Part 212 requirements because it is not a High Toxicity Air Contaminant (non-HTAC) and has an emission rate potential (ERP) that is 100 pounds per year or less, facility-wide, based on 8760 hours per year and maximum design capacity.

Monitoring Frequency: UPON REQUEST OF REGULATORY AGENCY
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 30: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.2

Item 30.1:
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 000075-44-5 PHOSGENE

Item 30.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
The Building 1 phosgene and Building 2 phosgene/thionyl packed tower scrubbers (emission sources 00010 and 00014) and the finishing scrubber (emission source 00020) shall operate with a maximum pressure drop of 3 inches of water column. The pressure drop will be monitored and recorded once every 30 minutes while operating. Records must be maintained onsite and be readily available upon request.

The scrubbers and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but notlimited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: PRESSURE DROP
Upper Permit Limit: 3 inches of water
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE - SEE MONITORING DESCRIPTION
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 31: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.2

Item 31.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 101 Emission Source: 00010

Emission Unit: 0-00001
Process: 102 Emission Source: 00010

Emission Unit: 0-00001
Process: 103 Emission Source: 00014

Emission Unit: 0-00001
Process: 104 Emission Source: 00014

Regulated Contaminant(s):
CAS No: 000075-44-5 PHOSGENE

Item 31.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
Maximum phosgene flow to either of the two phosgene

scrubbers (emission sources 00010 & 00014) is 240 pounds per hour, recorded hourly.

The scrubbers and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Parameter Monitored: FLOW RATE
Upper Permit Limit: 240 pounds per hour
Monitoring Frequency: HOURLY
Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE - SEE MONITORING DESCRIPTION
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 32: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.2

Item 32.1:
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 000075-44-5 PHOSGENE

Item 32.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:

Air contaminants listed in Section 212-2.2 Table 2 – High Toxicity Air Contaminant (HTAC) List shall either not exceed the mass emission limit (MEL) listed or demonstrate compliance with the air cleaning requirements as specified in Subdivision 212-2.3(b), Table 4 – Degree of Air Cleaning Required for Non-Criteria Air Contaminants for the environmental rating assigned to the contaminant by the department.

The facility emits phosgene, which is listed in Table 2 as a HTAC with a MEL of 500 pounds per year.

A technical review of the emission calculations submitted by Twin Lake Chemical Inc. was conducted in accordance

with NYSDEC DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants under Part 212. The facility's annual actual phosgene mass emission rate is 0.5 pounds per year from two sources which each have a 99.5% control efficiency - finishing scrubber (emission source 000020) and the emergency scrubber (emission source 00019). As such, the phosgene emissions comply with the Part 212 requirements.

Monitoring Frequency: UPON REQUEST OF REGULATORY AGENCY
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 33: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.2

Item 33.1:
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 000067-66-3 CHLOROFORM

Item 33.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Air contaminants listed in Section 212-2.2 Table 2 – High Toxicity Air Contaminant (HTAC) List shall either not exceed the mass emission limit (MEL) listed or demonstrate compliance with the air cleaning requirements as specified in Subdivision 212-2.3(b), Table 4 – Degree of Air Cleaning Required for Non-Criteria Air Contaminants for the environmental rating assigned to the contaminant by the department.

The facility emits chloroform, which is listed in Table 2 as a HTAC with a MEL of 100 pounds per year.

A technical review of the emission calculations submitted by Twin Lake Chemical Inc. was conducted in accordance with NYSDEC DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants under Part 212. The facility's annual actual chloroform mass emission rate is 0.015 pounds per year from two sources which have a combined 99% control efficiency – air stripper #1 (emission source 000017) and the air stripper #2 (emission source 00018). As such, the chloroform emissions comply with the Part 212 requirements.

Monitoring Frequency: UPON REQUEST OF REGULATORY AGENCY
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 34: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.2

Item 34.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001 Emission Point: 00019
Process: 108 Emission Source: 00019

Emission Unit: 0-00001 Emission Point: 00019
Process: 108 Emission Source: 0019B

Regulated Contaminant(s):
CAS No: 000075-44-5 PHOSGENE

Item 34.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
Phosgene Storage Area Emergency Scrubber:

Phosgene is stored in 1-ton containers in Building 4, near one of the facility's phosgene sensors. The phosgene sensor alarm is set at 0.25 ppm. If the alarm is triggered, the emergency scrubber (emission source 00019) which is in adjacent Building 23, is automatically activated and draws air from the Building 2 phosgene supply room.

The emergency scrubber will operate with a minimum sodium hydroxide (NaOH) concentration of 6 percent. Proper operation of the scrubber's pump and blower will be verified and recorded once per day. The scrubbing liquid concentration shall be determined via titration, adjusted as necessary to maintain this concentration, and recorded at least once per month.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition,

including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request.

Records of all instances of emergency scrubber activation must be kept, including the date, time, duration, and reason for activation, in a log book maintained on-site and made available to Department representatives upon request.

An annual report must be submitted to the Regional Air Pollution Control Engineer (RAPCE) by January 30th for the prior calendar year. The report shall include an accounting of all instances of emergency scrubber activation, or if none occurred, a statement to that effect.

Parameter Monitored: SODIUM HYDROXIDE
Lower Permit Limit: 6 percent
Monitoring Frequency: MONTHLY
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 35: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR 212-2.2

Item 35.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 101 Emission Source: 00010

Emission Unit: 0-00001
Process: 101 Emission Source: 00020

Emission Unit: 0-00001
Process: 102 Emission Source: 00010

Emission Unit: 0-00001
Process: 102 Emission Source: 00020

Emission Unit: 0-00001
Process: 103 Emission Source: 00014

Emission Unit: 0-00001
Process: 103 Emission Source: 00020

Emission Unit: 0-00001
Process: 104 Emission Source: 00020

Emission Unit: 0-00001
Process: 104 Emission Source: 00104

Regulated Contaminant(s):
CAS No: 000075-44-5 PHOSGENE

Item 35.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:

Four perimeter phosgene monitors, which alarm at 0.5 ppm, are located near the property lines to the east, west, north, and south of the facility (identified as monitors #3, #4, #5, and #7). Additionally, one phosgene monitor which alarms at 0.25 ppm is located within the Building 4 phosgene storage room (identified as monitor #6).

Each monitor is connected to a computer, chart recorder, and the facility security alarm system. This equipment is checked once per day to ensure that each item is properly operating.

Each monitor must be assessed for proper functioning, including a zero check and a visual check of the display, once per calendar week.

The four perimeter monitors must be calibrated according to manufacturer's instructions every six months.

The Building 4 monitor must be calibrated according to manufacturer's instructions every month and, at a minimum, the electrochemical sensor shall be replaced annually.

The following records will be maintained in a bound logbook kept on site and made available upon request to Department representatives:
- weekly assessment dates and sensor status,
- semiannual calibration dates,
- sensor replacement dates, and
- all incidents of alarm activation including the date, time, duration and cause.

An annual report must be submitted to the Regional Air Pollution Control Engineer (RAPCE) by January 30th for the prior calendar year. The report shall include an accounting of all instances of phosgene monitor alarm activation, or if none occurred, a statement to that

effect. The report shall also include the date(s) of phosgene sensor change(s).

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2022.
Subsequent reports are due every 12 calendar month(s).

Condition 36: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 36.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 105 Emission Source: 00016

Emission Unit: 0-00001
Process: 105 Emission Source: 0105A

Emission Unit: 0-00001
Process: 105 Emission Source: 0105B

Emission Unit: 0-00001
Process: 105 Emission Source: 0105C

Regulated Contaminant(s):
CAS No: 007719-12-2 PHOSPHOROUS TRICHLORIDE
CAS No: 010026-13-8 PHOSPHORANE, PENTACHLORO- CL5P
CAS No: 007782-50-5 CHLORINE

Item 36.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
Phosphorous Pentachloride (PCl5) Production:

When used to control emissions from the production of phosphorous pentachloride (PCl5), the Building 2 venturi/packed tower scrubber (emission source 00016) shall operate with a minimum sodium hydroxide (NaOH) concentration of 1 percent. The NaOH concentration will be determined by titration prior to the start of each PCl5 batch and recorded. The 1% NaOH concentration correlates to a pH of 13.1.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request. Records must be maintained onsite and be readily available for review by Department representatives upon request.

Each excursion of operation outside the operational ranges except during startup and shut down periods, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Any excursion or release during the production of PCL5 shall be immediately reported to this Department.

All deviations from normal operating ranges (or a statement that no deviations occurred) are to be noted and included in an annual report submitted to the Regional Air Pollution Control Engineer office by January 30th for the preceding calendar year.

Parameter Monitored: SODIUM HYDROXIDE
Lower Permit Limit: 1 percent
Monitoring Frequency: PER BATCH OF PRODUCT/RAW MATERIAL CHANGE
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE - SEE MONITORING DESCRIPTION
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2022.
Subsequent reports are due every 12 calendar month(s).

Condition 37: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 37.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 105 Emission Source: 00016

Emission Unit: 0-00001
Process: 105 Emission Source: 0105A

Emission Unit: 0-00001
Process: 105 Emission Source: 0105B

Emission Unit: 0-00001
Process: 105 Emission Source: 0105C

Regulated Contaminant(s):

CAS No: 007719-12-2	PHOSPHOROUS TRICHLORIDE
CAS No: 010026-13-8	PHOSPHORANE, PENTACHLORO- CL5P
CAS No: 007782-50-5	CHLORINE

Item 37.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE
Monitoring Description:
Phosphorous Pentachloride (PCl5) Production:

When used to control emissions from the production of phosphorous pentachloride (PCl5), the Building 2 venturi/packed tower scrubber (emission source 00016) shall operate with a minimum caustic scrubber liquid flow rate of 75 gallons per minute (gpm) into the packed tower portion of the unit. The flow rate will be monitored and recorded once every 30 minutes while operating.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request. Records must be maintained onsite and be readily available for review by Department representatives upon request.

Each excursion of operation outside the operational ranges except during startup and shut down periods, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Any excursion or release during the production of PCL5 shall be immediately reported to this Department.

All deviations from normal operating ranges (or a statement that no deviations occurred) are to be noted and included in an annual report submitted to the Regional Air Pollution Control Engineer by January 30th for the preceding calendar year.

Parameter Monitored: FLOW RATE
Lower Permit Limit: 75 gallons per minute
Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE - SEE MONITORING DESCRIPTION
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2022.
Subsequent reports are due every 12 calendar month(s).

Condition 38: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 38.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 105 Emission Source: 00016

Emission Unit: 0-00001
Process: 105 Emission Source: 0105A

Emission Unit: 0-00001
Process: 105 Emission Source: 0105B

Emission Unit: 0-00001
Process: 105 Emission Source: 0105C

Regulated Contaminant(s):

CAS No: 007719-12-2	PHOSPHOROUS TRICHLORIDE
CAS No: 010026-13-8	PHOSPHORANE, PENTACHLORO- CL5P
CAS No: 007782-50-5	CHLORINE

Item 38.2:
Compliance Demonstration shall include the following monitoring:

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

Phosphorous Pentachloride (PCl5) Production:

Prior to each PCl5 batch, the reactors (emission sources 0105A & 0105B), chlorine lines, and chlorine vaporizer (emission source 0105C) will be pressure tested to 60 psig. All lines and valves will be visually checked for signs of corrosion and wear.

The scrubber and associated monitoring equipment shall be operated, calibrated, and maintained per this permit, scrubber design, the manufacturer's recommendations, and good engineering practice, including maintaining necessary parts onsite for routine repairs and maintenance.

All records pertaining to this monitoring condition, including but not limited to, parametric data, excursions, corrective actions taken and reporting, shall be maintained onsite and be readily available for review by Department representatives upon request. Records must be maintained onsite and be readily available for review by Department representatives upon request.

Each excursion of operation outside the operational ranges except during startup and shut down periods, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Any excursion or release during the production of PCL5 shall be immediately reported to this Department.

All deviations from normal operating ranges (or a statement that no deviations occurred) are to be noted and included in an annual report submitted to the Regional Air Pollution Control Engineer by January 30th for the preceding calendar year.

Parameter Monitored: PRESSURE
Lower Permit Limit: 60 pounds per square inch gauge
Monitoring Frequency: PER BATCH OF PRODUCT/RAW MATERIAL CHANGE
Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE - SEE MONITORING DESCRIPTION
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2022.
Subsequent reports are due every 12 calendar month(s).

Condition 39: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 39.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 105 Emission Source: 00016

Emission Unit: 0-00001
Process: 105 Emission Source: 0105A

Emission Unit: 0-00001
Process: 105 Emission Source: 0105B

Emission Unit: 0-00001
Process: 105 Emission Source: 0105C

Regulated Contaminant(s):

CAS No: 007719-12-2	PHOSPHOROUS TRICHLORIDE
CAS No: 010026-13-8	PHOSPHORANE, PENTACHLORO- CL5P
CAS No: 007782-50-5	CHLORINE

Item 39.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:

Phosphorous Pentachloride (PCl5) Production – Annual Maintenance Procedures:

The reactors (emission sources 0105A & 0105B) will be disassembled, and the interior visually inspected for corrosion, erosion, and cracking, once per calendar year.

The chlorine vaporizer (emission source 0105C) will be disassembled and cleaned, and the interior visually inspected for corrosion, erosion, and wear, once per calendar year. All joints will be leak tested using soap and water. The unit will be kept free of moisture during the testing process.

The reactor pressure relief devices shall be cleaned and inspected for signs of wear and corrosion once per calendar year. They shall be tested to 75% of rupture pressure.

Monitoring Frequency: ANNUALLY
Reporting Requirements: ANNUALLY (CALENDAR)
Reports due 30 days after the reporting period.
The initial report is due 1/30/2022.
Subsequent reports are due every 12 calendar month(s).

Condition 40: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 40.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001
Process: 100 Emission Source: 00012

Emission Unit: 0-00001
Process: 100 Emission Source: 00016

Regulated Contaminant(s):
CAS No: 000552-30-7 TRIMELLITIC ANHYDRIDE

Item 40.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Twin Lake Chemical shall comply with the degree of cleaning requirements specified under 6NYCRR 212-2.3(b) Table 4 for trimellitic anhydride (TMA) emissions. The Department has assigned an environmental rating (ER) of "A" per 6NYCRR Part 212 to TMA. For the documented TMA emission rate potential (ERP) of 1.98 pounds per hour, Table 4 sets the degree of required air cleaning at a minimum of 99%.

Twin Lake must also, via air dispersion modeling, demonstrate that the maximum offsite air concentration is less than the applicable short-term (SGC) guideline concentration found in the NYSDEC guidance document DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants under Part 212. This additional requirement is due to the highly protective SGC assigned to TMA in recognition of the perils of short-term exposure to this chemical.

TMA emissions were modeled using the Aerscreen air dispersion modeling program and the procedures detailed in DAR-1 on a potential-to-emit basis. The maximum offsite atmospheric impacts predicted by the model were compared

to the SGCs and AGCs for each chemical and were determined to comply with Part 212 control requirements after the overall control efficiency was increased by connecting a second existing scrubber in series with the initial scrubber. The two scrubbers in series - the Building 1 venturi-packed tower combination scrubber (emission source 00012) and the Building 2 venturi-packed tower combination scrubber (emission source 00016) – must be used to control emissions whenever TMA is charged to the reactors (emission sources 0010A and 0010B) within Process 100 to assure continued compliance with the SGC. Continued compliance will also be assured by surrogate parametric monitoring which is detailed in other monitoring conditions in this permit under a Part 212-2.1 citation.

Prior to any change in operational parameters which could cause an increase in the potential-to-emit TMA, the impacts associated with the planned increase in emissions must be re-evaluated and reported to the Regional Air Pollution Control Engineer.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Condition 41: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 41.1:
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 007719-09-7 THIONYL CHLORIDE

Item 41.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Twin Lake Chemical shall comply with the degree of cleaning requirements specified under 6NYCRR 212-2.3(b) Table 4 for thionyl chloride emissions. The Department has assigned an environmental rating (ER) of “B” per 6NYCRR Part 212 to thionyl chloride. For the documented thionyl chloride emission rate potential (ERP) of 0.1175 pound per hour, Table 4 sets the degree of required air cleaning at a level at which air dispersion modeling can demonstrate that the maximum offsite air concentration is less than the applicable short-term (SGC) and annual (AGC) guideline

concentrations found in the NYSDEC guidance document DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants under Part 212.

Thionyl chloride emissions were modeled using the Aerscreen air dispersion modeling program and the procedures detailed in DAR-1 on a potential-to-emit (PTE) basis. The maximum offsite atmospheric impacts predicted by the model were compared to the SGCs and AGCs for each chemical and were determined to comply with Part 212 control requirements. Continued compliance will be assured by surrogate parametric monitoring which is detailed in other monitoring conditions in this permit under a Part 212-2.1 citation.

Prior to any change in operational parameters which could cause an increase in the thionyl chloride PTE, the impacts associated with the planned increase in emissions must be re-evaluated and reported to the Regional Air Pollution Control Engineer.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 42: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 42.1:
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 000074-87-3 METHYL CHLORIDE

Item 42.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Twin Lake Chemical shall comply with the degree of cleaning requirements specified under 6NYCRR 212-2.3(b) Table 4 for methyl chloride emissions. The Department has assigned an environmental rating (ER) of “B” per 6NYCRR Part 212 to methyl chloride. For the documented methyl chloride emission rate potential (ERP) of 0.0445 pound per hour, Table 4 sets the degree of required air cleaning at a level at which air dispersion modeling can demonstrate that the maximum offsite air concentration is less than the applicable short-term (SGC) and annual (AGC) guideline concentrations found in the NYSDEC guidance document DAR-1

Guidelines for the Evaluation and Control of Ambient Air Contaminants under Part 212.

Methyl chloride emissions were modeled using the Aerscreen air dispersion modeling program and the procedures detailed in DAR-1 on a potential-to-emit (PTE) basis. The maximum offsite atmospheric impacts predicted by the model were compared to the SGC and AGC for each chemical and were determined to comply with Part 212 control requirements. Continued compliance will be assured by surrogate parametric monitoring which is detailed in other monitoring conditions in this permit under a Part 212-2.1 citation.

Prior to any change in operational parameters which could cause an increase in the methyl chloride PTE, the impacts associated with the planned increase in emissions must be re-evaluated and reported to the Regional Air Pollution Control Engineer.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 43: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 43.1:
The Compliance Demonstration activity will be performed for the facility:
The Compliance Demonstration applies to:

Emission Unit: 0-00001 Emission Point: 00017
Process: 107 Emission Source: 00017

Emission Unit: 0-00001 Emission Point: 00018
Process: 107 Emission Source: 00018

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

Item 43.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Two air strippers (emission sources 00017 & 00018) remove chlorinated hydrocarbons from distillation process wastewater. The permittee shall conduct influent and effluent sampling, consisting of four grab samples over a 24-hour period, to confirm the actual VOC removal rate

within 180 days of permit issuance. The sampling results must be submitted to the Regional Air Pollution Control Engineer within 60 days of sampling.

Reference Test Method: EPA Method 624
Monitoring Frequency: SINGLE OCCURRENCE
Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST METHOD INDICATED
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

Condition 44: Compliance Demonstration
Effective between the dates of 02/12/2021 and 02/11/2026

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

Item 44.1:
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):
CAS No: 007647-01-0 HYDROGEN CHLORIDE
CAS No: 007782-50-5 CHLORINE

Item 44.2:
Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES
Monitoring Description:
Twin Lake Chemical shall comply with the degree of cleaning requirements specified under 6NYCRR 212-2.3(b) Table 4 for chlorine and hydrogen chloride emissions. The Department has assigned an environmental rating (ER) of "B" per 6NYCRR Part 212 to chlorine and hydrogen chloride. For the documented chlorine and hydrogen chloride emission rate potentials (ERP) of 0.5 and 1.119 pound per hour, respectively, Table 4 sets the degree of required air cleaning at a level at which air dispersion modeling can demonstrate that the maximum offsite air concentration is less than the applicable short-term (SGC) and annual (AGC) guideline concentrations found in the NYSDEC guidance document DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants under Part 212.

Chlorine and hydrogen chloride emissions were modeled using the Aerscreen air dispersion modeling program and the procedures detailed in DAR-1 on a potential-to-emit (PTE) basis. The maximum offsite atmospheric impacts predicted by the model were compared to the SGCs and AGCs for each chemical and were determined to comply with Part 212 control requirements. Continued compliance will be assured by surrogate parametric monitoring which is detailed in other monitoring conditions in this permit under a Part 212-2.1 citation.

Prior to any change in operational parameters which could cause an increase in the chlorine or hydrogen chloride PTE, the impacts associated with the planned increase in emissions must be re-evaluated and reported to the Regional Air Pollution Control Engineer.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION
Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

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

Condition 45: Emission Point Definition By Emission Unit
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 45.1:
The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 0-00001

Emission Point: 00012
Height (ft.): 21 Diameter (in.): 8
NYTMN (km.): 4787.9 NYTME (km.): 198.4 Building: Bldg 1

Emission Point: 00016
Height (ft.): 34 Diameter (in.): 10
NYTMN (km.): 4787.9 NYTME (km.): 198.4 Building: Bldg 2

Emission Point: 00017
Height (ft.): 34 Diameter (in.): 6
NYTMN (km.): 4787.9 NYTME (km.): 198.4 Building: Bldg 1

Emission Point: 00018
Height (ft.): 30 Diameter (in.): 3
NYTMN (km.): 4787.9 NYTME (km.): 198.4 Building: Bldg 1

Emission Point: 00019
Height (ft.): 43 Diameter (in.): 8
NYTMN (km.): 4787.9 NYTME (km.): 198.4 Building: Bldg 23

Emission Point: 00020
Height (ft.): 21 Diameter (in.): 4
NYTMN (km.): 4787.936 NYTME (km.): 199.328 Building: Bldg 1

Condition 46: Process Definition By Emission Unit
Effective between the dates of 02/12/2021 and 02/11/2026

Applicable State Requirement:6 NYCRR Subpart 201-5

Item 46.1:
This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 0-00001
Process: 100 Source Classification Code: 3-01-132-99
Process Description:
Trimellitic anhydride monoacid chloride (TMAC) is manufactured in two batch reactors by the reaction of trimellitic anhydride (TMA) and thionyl chloride. Particulates generated during the charging of TMA powder to the reactor are controlled by two scrubbers operated in series - the Building 1 venturi-packed tower combination scrubber (emission source 00012) and the Building 2 venturi-packed tower combination scrubber (emission source 00016). Gaseous emissions of hydrogen chloride, thionyl chloride & sulfur dioxide from the reactors are directed to two packed tower scrubbers (thionyl scrubbers 1 & 2 - emission sources 00011 & 00015) which recirculate caustic solution. Gases from these scrubbers are vented to the finishing scrubber (emission source 00020) for additional emission control.

Emission Source/Control: 00011 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00012 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, VENTURI SCRUBBER

Emission Source/Control: 00015 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00016 - Control
Control Type: VENTURI SCRUBBER

Emission Source/Control: 00020 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 0010A - Process

Emission Source/Control: 0010B - Process

Item 46.2:
This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 0-00001
Process: 101 Source Classification Code: 3-01-132-99

Process Description:
Terephthaloyl chloride (TPC) is manufactured in a 1000-gallon batch reactor by the reaction of terephthalic acid and phosgene. Particulates generated during the charging of solids to the reactor are controlled by two scrubbers operated in series - the Building 1 venturi-packed tower combination scrubber (emission source 00012) and the Building 2 venturi-packed tower combination scrubber (emission source 00016). Gaseous emissions from the reactor are vented to a packed column scrubber (emission source 00010) which recirculates caustic solution. Gases from this scrubber are vented to the finishing scrubber (emission source 00020) for additional emission control.

Emission Source/Control: 00010 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00012 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, VENTURI SCRUBBER

Emission Source/Control: 00016 - Control
Control Type: VENTURI SCRUBBER

Emission Source/Control: 00020 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 0010C - Process

Item 46.3:
This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 0-00001
Process: 102 Source Classification Code: 3-01-132-99
Process Description:
Trimellitic trichloride (TMTC) is manufactured in a 1000-gallon batch reactor by the reaction of phosgene and trimellitic monoacid chloride. Particulates generated during the charging of solids to the reactor are controlled by two scrubbers operated in series - the Building 1 venturi-packed tower combination scrubber (emission source 00012) and the Building 2 venturi-packed tower combination scrubber (emission source 00016). Gaseous emissions from the reactor are vented to a packed column scrubber (emission source 00010) which recirculates caustic solution. Gases from this scrubber are vented to the finishing scrubber (emission source 00020) for additional emission control.

Emission Source/Control: 00010 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00012 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, VENTURI SCRUBBER

Emission Source/Control: 00016 - Control
Control Type: VENTURI SCRUBBER

Emission Source/Control: 00020 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00102 - Process

Item 46.4:
This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 0-00001
Process: 103 Source Classification Code: 3-01-132-99
Process Description:
Isophthaloyl chloride (IPC) is manufactured in two 1000-gallon batch reactors by the reaction of isophthalic acid (IPA) and thionyl chloride. Particulates generated during the charging of IPA powder to the reactor are controlled by the Building 2 venturi-packed tower combination scrubber, emission source 00016. Gaseous emissions from the reactor are vented to a packed column scrubber (emission source 00014) which recirculates caustic solution. Gases from this scrubber are vented to the finishing scrubber (emission source 00020) for additional emission control.

Emission Source/Control: 00014 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00016 - Control
Control Type: VENTURI SCRUBBER

Emission Source/Control: 00020 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00103 - Process

Emission Source/Control: 0103B - Process

Item 46.5:
This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 0-00001
Process: 104 Source Classification Code: 3-01-132-99
Process Description:
Orthophthaloyl chloride is manufactured in a batch reactor by the reaction of phthalic anhydride and phosgene. Particulates generated during the charging of phthalic anhydride solids to the reactor are controlled by the building 2 venturi-packed tower combination scrubber, emission source 00016. Gaseous emissions from the reactor are vented to a packed column scrubber (emission source 00014) which recirculates caustic solution. Gases from this scrubber are vented to the finishing scrubber (emission source 00020) for additional emission control.

Emission Source/Control: 00014 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00016 - Control
Control Type: VENTURI SCRUBBER

Emission Source/Control: 00020 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00104 - Process

Item 46.6:
This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 0-00001
Process: 105 Source Classification Code: 3-01-132-99
Process Description:
Phosphorus pentachloride (PCl5) is made in two 200-gallon nickel reactors by the reaction of phosphorous trichloride (PCl3) and chlorine. During the reaction, the reactor is not vented. After the reaction is complete, the reactor is placed under vacuum and excess chlorine, PCL5, and PCL3 are controlled by the Building 2 venturi-packed tower scrubber (emission source 00016). Chlorine is received and stored on-site in 1-ton cylinders.

Emission Source/Control: 00016 - Control
Control Type: VENTURI SCRUBBER

Emission Source/Control: 0105A - Process

Emission Source/Control: 0105B - Process

Emission Source/Control: 0105C - Process

Item 46.7:
This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 0-00001
Process: 106 Source Classification Code: 3-01-132-99
Process Description:
Molten terephthaloyl chloride is converted into a solid flake form in a totally enclosed flaker. The building 1 combination venturi-packed scrubber (emission source 00012) is used to control particulate emissions during the process.

Emission Source/Control: 00012 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, VENTURI SCRUBBER

Emission Source/Control: 00016 - Control
Control Type: VENTURI SCRUBBER

Emission Source/Control: 0012A - Process

Item 46.8:
This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 0-00001
Process: 107 Source Classification Code: 3-01-132-99
Process Description:
All jet water and water from the phosgene and thionyl scrubbers (emission sources 00010, 00011, 00014, & 00015) are directed to two air strippers (emission sources 00017 & 00018) and to emission points 00017 & 00018. In each air stripper, water flows down through a packed column and a blower directs air up through the column to remove volatile organic compounds, methylene chloride, chloroform, and methyl chloride.

Emission Source/Control: 00017 - Process

Emission Source/Control: 00018 - Process

Item 46.9:
This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 0-00001
Process: 108 Source Classification Code: 4-07-860-03
Process Description:
In the event of a leak or release from the 1-ton phosgene containers storage area in Building 23, the emergency scrubber (emission source 00019) draws air from the building's floor and passes it through the packed scrubber with a countercurrent flow of caustic solution and releases to emission point 00019.

Emission Source/Control: 00019 - Control
Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 0019B - Process