



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

**IDENTIFICATION INFORMATION**

Permit Type: Air State Facility  
Permit ID: 9-2909-00045/02001  
Effective Date: 10/16/2014 Expiration Date: 10/15/2019

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 is a manufacturer of various organic acid chlorides used as intermediaries in the production of other compounds and encompasses two main production buildings and 8 reactors. The primary products produced are trimellitic trichloride, trimellitic Anhydride Monoacid chloride, isophthaloyl chloride, orthophthaloyl chloride, terephthaloyl chloride, and phosphorous pentachloride (2-200 gallon nickel reactors).

Phosgene and thionyl chloride are used as chlorinating agents. The phosgene is purchased in 1 ton containers from Vandemark Chemical located next to the facility.

Raw materials are added to the batch reactors along with a chlorinating agent and a catalyst. Prior to opening the reactor for chemical addition, the reactor is put under vacuum to remove gases. During the reaction process, the reactor is under slight pressure. Reactor temperatures are monitored. After the reaction is completed, the material is transferred to a distillation unit to refine and separate the product. Air strippers remove chlorinated hydrocarbons from wastewater prior to discharge to Lockport WWTP. The wastewater is generated as condensate from the steam educator vacuum system associated with the distillation process. Wastewater is continuously sampled for pH. Still bottoms are transferred off-site.

The scrubbers are packed tower and venturis. The packed tower scrubbers are utilized to remove acid gases and have a gravitational type of orifice distributor which consists of flat trays with a



number of risers for vapor flow and perforations in the tray floor for liquid flow. The venturis are used to control particulate emissions from the addition of dry materials. Gas flow from the phosgene and thionyl scrubbers are now 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 now has an automatic interlock to respond to a phosgene concentration of 0.25ppm.

Four perimeter alarms at the fenceline 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 PORTER  
  270 MICHIGAN AVE  
  BUFFALO, NY 14203-2915

Authorized Signature: \_\_\_\_\_ Date: \_\_\_ / \_\_\_ / \_\_\_\_



**Notification of Other State Permittee Obligations**

**Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification**

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

**Item B: Permittee's Contractors to Comply with Permit**

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

**Item C: Permittee Responsible for Obtaining Other Required Permits**

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

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

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



**LIST OF CONDITIONS**

**DEC GENERAL CONDITIONS**

**General Provisions**

- Facility Inspection by the Department
- Relationship of this Permit to Other Department Orders and Determinations
- Applications for permit renewals, modifications and transfers
- Permit modifications, suspensions or revocations by the Department

**Facility Level**

- Submission of application for permit modification or renewal-REGION 9 HEADQUARTERS



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

**Condition 1: Facility Inspection by the Department**

**Applicable State Requirement: ECL 19-0305**

**Item 1.1:**

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

**Item 1.2:**

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

**Item 1.3:**

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

**Condition 2: Relationship of this Permit to Other Department Orders and Determinations**

**Applicable State Requirement: ECL 3-0301 (2) (m)**

**Item 2.1:**

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

**Condition 3: Applications for permit renewals, modifications and transfers**

**Applicable State Requirement: 6 NYCRR 621.11**

**Item 3.1:**

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

**Item 3.2:**

The permittee must submit a renewal application at least 180 days before expiration of permits for Title V Facility Permits, or at least 30 days before expiration of permits for State Facility Permits.

**Item 3.3:**

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



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

**Item 4.1:**

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

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

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

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

**Item 5.1:**

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

NYSDEC Regional Permit Administrator  
Region 9 Headquarters  
Division of Environmental Permits  
270 Michigan Avenue  
Buffalo, NY 14203-2915  
(716) 851-7165

**New York State Department of Environmental Conservation**

Permit ID: 9-2909-00045/02001

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:  
2816 - INORGANIC PIGMENTS  
2869 - INDUSTRIAL ORGANIC CHEMICALS, NEC

Permit Effective Date: 10/16/2014

Permit Expiration Date: 10/15/2019



**LIST OF CONDITIONS**

**FEDERALLY ENFORCEABLE CONDITIONS**

**Facility Level**

- 1 6 NYCRR 211.1: Air pollution prohibited
- 2 6 NYCRR 211.1: Compliance Demonstration
- 3 6 NYCRR 212.4 (b): Compliance Demonstration
- 4 6 NYCRR 212.6 (a): Compliance Demonstration

**Emission Unit Level**

**EU=0-00001,Proc=100**

- 5 6 NYCRR 212.4 (b): Compliance Demonstration

**EU=0-00001,Proc=107**

- 6 6 NYCRR 212.4 (b): Compliance Demonstration

**EU=0-00001,EP=00012**

- 7 6 NYCRR 212.4 (b): Compliance Demonstration

**EU=0-00001,EP=00016**

- 8 6 NYCRR 212.4 (b): Compliance Demonstration

**EU=0-00001,EP=00016,Proc=105**

- 9 6 NYCRR 212.4 (b): Compliance Demonstration

**EU=0-00001,EP=00019,Proc=108**

- 10 6 NYCRR 212.4 (b): Compliance Demonstration

**EU=0-00001,EP=00020**

- 11 6 NYCRR 212.4 (b): Compliance Demonstration

**STATE ONLY ENFORCEABLE CONDITIONS**

**Facility Level**

- 12 ECL 19-0301: Contaminant List
- 13 6 NYCRR 201-1.4: Malfunctions and start-up/shutdown activities
- 14 6 NYCRR Subpart 201-5: Emission Unit Definition
- 15 6 NYCRR 201-5.2 (c): Renewal deadlines for state facility permits
- 16 6 NYCRR 201-5.3 (c): Compliance Demonstration
- 17 6 NYCRR 211.2: Visible Emissions Limited

**Emission Unit Level**

- 18 6 NYCRR Subpart 201-5: Emission Point Definition By Emission Unit
- 19 6 NYCRR Subpart 201-5: Process Definition By Emission Unit



**FEDERALLY ENFORCEABLE CONDITIONS**  
**\*\*\*\* 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: Emergency Defense - 6 NYCRR 201-1.5**

An emergency constitutes an affirmative defense to an action brought 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 and/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;
- (3) During the period of the emergency the facility owner and/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 and/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 and/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 F: 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 G: 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 H: 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 I: 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 J: 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 K: 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 L: Permit Exclusion - ECL 19-0305**

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

**Item M: Federally Enforceable Requirements - 40 CFR 70.6 (b)**

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

**FEDERAL APPLICABLE REQUIREMENTS**  
**The following conditions are federally enforceable.**

**Condition 1: Air pollution prohibited**



Effective between the dates of 10/16/2014 and 10/15/2019

Applicable Federal Requirement:6 NYCRR 211.1

**Item 1.1:**

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

**Condition 2: Compliance Demonstration**

Effective between the dates of 10/16/2014 and 10/15/2019

Applicable Federal Requirement:6 NYCRR 211.1

**Item 2.1:**

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 007647-01-0 HYDROGEN CHLORIDE

CAS No: 007719-09-7 THIONYL CHLORIDE

CAS No: 000075-44-5 PHOSGENE

**Item 2.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

There are four perimeter phosgene monitors identified as monitors #2, #3, #4, & #5 located at the fencelines to the east, northeast, west and south of the phosgene production facilities. These monitors are alarmed at 0.5 ppm and are to be calibrated every six months. The monitors shall be visually checked weekly to assess for proper functioning including a zero check and visual check of the display. The controller /computer is checked daily. Dates of the weekly checks and status of the sensors shall be recorded in a logbook. The date(s) of sensor(s) replacement shall be recorded in the same logbook and included in the annual report submitted to this Department.

All incidents of alarm activation shall be documented including the time, date and cause and kept in a bound book to be made available to Department representatives on request.

Monitoring Frequency: ANNUALLY

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.





A flow meter shall monitor the flow rate at the inlet of the scrubber and shall be maintained for both phosgene scrubbers at a minimum caustic flow rate of 50 gpm. The flow meters shall be calibrated, operated and maintained according to the manufacturer's guidance.

The spent (3%) caustic solution from the finishing scrubber is transferred into the building 1 or building 2 scrubbers. These scrubbers shall circulate the caustic solution until the pH drops below 9 and the spent caustic solution shall then be discharged. The pH of the scrubbing liquid shall not drop below 8.5.

The permittee shall submit pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirements specified above.

The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor every half hour while the emissions unit is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The pH meter shall be tested monthly. The permittee shall collect and record the following information each day:

1. The pH of the scrubber liquor, on a continuous basis.
2. A log of the downtime for the control device, monitoring equipment, and the associated emissions unit.

The packed tower scrubber preventative maintenance shall include, at a minimum, inspection and daily recording of:

- a. visible liquid leaks;
- b. system gas leaks;
- c. abrasion, corrosion or buildup on fans, ducts, pipes;
- d. caustic flow

Yearly, the facility shall conduct an internal inspection of the packed scrubber for signs of:

1. corrosion and erosion
2. solids deposits in packed beds or tray orifices



3. solids accumulation in mist eliminators
4. worn packing

If any of these conditions exist the appropriate measures for remediation shall be undertaken within 24 hours.

Yearly, 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.

Records are to be maintained in a bound book and are to include dates of inspections, calibrations, and conditions requiring corrective actions along with completion dates of the corrective actions taken. These records and other data recorded during inspections of the scrubbers shall be retained in company files for a period of not less than five years and shall be made available to Department representatives for review during normal business hours.

All deviations from normal operating ranges and malfunctions are to be noted and included in an annual report submitted to the NYSDEC Region 9 office under a truthfulness and accuracy statement. If no deviations from normal operating parameter ranges are found, a report shall be submitted stating so.

Parameter Monitored: SODIUM HYDROXIDE  
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 - SEE MONITORING DESCRIPTION  
Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.



The initial report is due 1/30/2015.  
Subsequent reports are due every 12 calendar month(s).

**Condition 4: Compliance Demonstration**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable Federal Requirement:6 NYCRR 212.6 (a)**

**Item 4.1:**

The Compliance Demonstration activity will be performed for the Facility.

**Item 4.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

No person shall cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source, except only the emission of uncombined water. Compliance with this requirement shall be determined by the facility owner/operator conducting a daily survey of visible emissions whenever a process is in operation. If any visible emissions are identified, corrective action is required. The Department reserves the right to perform or require the performance of a Method 9 opacity evaluation

Parameter Monitored: OPACITY

Upper Permit Limit: 20 percent

Reference Test Method: EPA Method 9

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING  
DESCRIPTION

Averaging Method: 6-MINUTE AVERAGE (METHOD 9)

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2015.

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

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

**Condition 5: Compliance Demonstration**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable Federal Requirement:6 NYCRR 212.4 (b)**

**Item 5.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 0-00001



Process: 100

Regulated Contaminant(s):

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

**Item 5.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Trimellitic anhydride monoacid chloride (TMAC) is manufactured in two batch reactors by the reaction of trimellitic anhydride & thionyl chloride. Vent gases of hydrogen chloride, thionyl chloride, & sulfur dioxide are first directed to packed tower scrubbers re-circulating caustic solution (thionyl scrubbers 1 & 2) and then to the finishing scrubber EP 00020. When charging trimellitic anhydride powder to the reactor a combination venturi-packed tower scrubber (EP 00012) is used to control dust.

A minimum scrubber control efficiency of 99% is required for the control of thionyl chloride emissions and shall be maintained by the implementation of a scrubber work practices and a Preventative Maintenance (PM) plan to be submitted which will include but not limited to as follows:

A flow meter shall monitor the flow rate at the inlet of the scrubber and shall be maintained at 18 gpm for thionyl scrubber #1 and 50 gpm for thionyl scrubber #2. The flow meters shall be calibrated, operated and maintained according to the manufacturer's guidance.

The spent (3%) caustic solution from the finishing scrubber is transferred into the building 1 or building 2 scrubbers. These scrubbers shall circulate this caustic solution until the pH drops below 9 and the spent caustic solution shall then be discharged. The pH of the scrubbing liquid shall not drop below 8.5.

The permittee shall submit pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirements specified above.

The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor every half hour while the emissions unit



is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The pH meter shall be tested monthly. The permittee shall collect and record the following information each day:

1. The pH of the scrubber liquor, on a continuous basis.
2. A log of the downtime for the control device, monitoring equipment, and the associated emissions unit.

The packed tower scrubber preventative maintenance shall include, at a minimum, inspection and daily recording of:

- a. visible liquid leaks;
- b. system gas leaks;
- c. abrasion, corrosion or buildup on fans, ducts, pipes;
- d. caustic flow

Yearly, the facility shall conduct an internal inspection of the packed scrubber for signs of:

1. corrosion and erosion
2. solids deposits in packed beds or tray orifices
3. solids accumulation in mist eliminators
4. worn packing

If any of these conditions exist the appropriate measures for remediation shall be undertaken within 24 hours.

Yearly, 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 be cleaned and inspected for signs of wear and corrosion. They shall be tested to 75% of rupture pressure.



Records are to be maintained in a bound book and are to include dates of inspections, calibrations, and conditions requiring corrective actions along with completion dates of the corrective actions taken. These records and other data recorded during inspections of the scrubbers shall be retained in company files for a period of not less than five years and shall be made available to Department representatives for review during normal business hours.

All deviations from normal operating ranges and malfunctions are to be noted and included in an annual report submitted to the NYSDEC Region 9 office under a truthfulness and accuracy statement. If no deviations from normal operating parameter ranges are found, a report shall be submitted stating so.

Parameter Monitored: SODIUM HYDROXIDE  
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 - SEE MONITORING DESCRIPTION  
Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 1/30/2015.  
Subsequent reports are due every 12 calendar month(s).

**Condition 6: Compliance Demonstration**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable Federal Requirement: 6 NYCRR 212.4 (b)**

**Item 6.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 0-00001  
Process: 107

Regulated Contaminant(s):  
CAS No: 000074-87-3 METHYL CHLORIDE  
CAS No: 0NY998-00-0 VOC  
CAS No: 000067-66-3 CHLOROFORM

**Item 6.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The air strippers remove chlorinated hydrocarbons from wastewater from the distillation process. At least once



during the term of this permit, the permittee shall conduct influent and effluent sampling, consisting of 4 grab samples over a 24 hour period, to determine the actual VOC removal rate and report these results to this Department.

Reference Test Method: EPA 624

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 7: Compliance Demonstration**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable Federal Requirement: 6 NYCRR 212.4 (b)**

**Item 7.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 0-00001

Emission Point: 00012

Regulated Contaminant(s):

CAS No: 000552-30-7

TRIMELLITIC ANHYDRIDE

**Item 7.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The venturi/packed tower scrubber, emission point 00012, located in building 1 is used to control particulate emissions during the charging of dry materials into acid chloride batch reactors (4) and during the flaking of terephthaloyl chloride (TPC). The scrubber shall be operated in a manner as to ensure the control efficiency of the scrubbing unit is maintained at a minimum of 99%.

The permittee will conduct compliance verifications for the venturi/packed tower scrubber, the primary device used to control dust from the charging of dry materials into a batch reactor associated with the manufacture of Trimellitic monoacid chloride (TMC); (Process 100) and terephthaloyl chloride; (Process 101) and the TPC flaker, (Process 106). These verifications shall include review of pertinent information relating to particulate emissions of the source, including but not limited to production rate, process material, scrubber control equipment operating parameters such as caustic flow rate and water pressure, scrubber maintenance such as inspection of venturi throats, water supply lines, and visible emissions on an established basis.



All instruments and control equipment will be calibrated, maintained, and operated according to the manufactures specifications.

The facility shall submit a Preventative Maintenance (PM) program to establish inspection and operating procedures for the venturi scrubber that will be approved by this Department. This is to be submitted within 90 days from the issuance of the permit.

Additionally, the permittee will investigate, in a timely manner, any instance where there is cause to believe that the required control efficiency is not being met. These instances include but are not limited to process upsets, control device malfunctions or problems, visible emissions, or complaints. The permittee shall determine the cause of any exceedance, make the necessary correction, and verify that the excess emissions problem has been corrected. 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.

Inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur.

All deviations from normal operating ranges and malfunctions are to be noted and included in an annual report submitted to the NYSDEC Region 9 office under a truthfulness and accuracy statement. If no deviations from normal operating parameter ranges are found, a report shall be submitted stating so.

Records of these verifications, investigations and corrective actions will be kept on-site in a format acceptable to the Department for a period of 5 years.

Parameter Monitored: DEGREE OF AIR CLEANING  
Lower Permit Limit: 99 percent  
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 1/30/2015.  
Subsequent reports are due every 12 calendar month(s).

**Condition 8: Compliance Demonstration**



Effective between the dates of 10/16/2014 and 10/15/2019

Applicable Federal Requirement: 6 NYCRR 212.4 (b)

**Item 8.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 0-00001 Emission Point: 00016

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

**Item 8.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The venturi packed-tower scrubber, emission point 00016, located in building 2 and associated with the charging of dry materials into the batch reactors shall be operated in a manner as to maintain the control efficiency of the scrubbing unit at a minimum of 99%.

The caustic flow rate to the scrubber shall be maintained at a minimum 75 gpm except when packaging phosphorous pentachloride or charging IPA/PA it shall be a minimum of 25 gpm.

The permittee will conduct compliance verifications for the venturi scrubber/packed tower to control dust from the charging of dry materials (phthalic anhydride & isophthalic acid) into a batch reactor associated with the manufacture of isophthaloyl chloride (IPC); (Process 103) and orthophthaloyl chloride (OPC); (Process 104) and phosphorous pentachloride; (Process 106). These verifications shall include review of pertinent information relating to particulate emissions of the source, including but not limited to production rate, process material, scrubber control equipment operating parameters such as caustic flow rate and water pressure, scrubber maintenance such as inspection of venturi throats, water supply lines, and visible emissions on an established basis.

The facility shall submit a Preventative Maintenance (PM) program to establish inspection and operating procedures for the venturi scrubber that will be approved by this Department. This is to be submitted within 90 days from the issuance of the permit.

Additionally, the permittee will investigate, in a timely



manner, any instance where there is cause to believe that the required control efficiency is not being met. These instances include but are not limited to process upsets, control device malfunctions or problems, visible emissions, or complaints. The permittee shall determine the cause of any exceedance, make the necessary correction, and verify that the excess emissions problem has been corrected. 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.

Inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur.

Records of these verifications, investigations and corrective actions will be kept on-site in a format acceptable to the Department for a period of 5 years.

All deviations from normal operating ranges are to be noted and included in an annual report submitted to the NYSDEC Region 9 office under a truthfulness and accuracy statement. If no deviations from normal operating parameter ranges are found, a report shall be submitted stating so.

Parameter Monitored: DEGREE OF AIR CLEANING  
Lower Permit Limit: 99 percent  
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 1/30/2015.  
Subsequent reports are due every 12 calendar month(s).

**Condition 9: Compliance Demonstration**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable Federal Requirement: 6 NYCRR 212.4 (b)**

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



Emission Unit: 0-00001  
Process: 105

Emission Point: 00016

Regulated Contaminant(s):

CAS No: 007719-12-2

PHOSPHOROUS TRICHLORIDE

CAS No: 007782-50-5

CHLORINE

**Item 9.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Potential emissions of unreacted chlorine and phosphorous trichloride released during the production of phosphorus pentachloride (PCL5) are to be controlled by the venturi scrubber, emission point 00016, located in building 2, with a minimum efficiency of 99%. Phosphorus trichloride is reacted with 5 pounds of excess chlorine added to each batch. The excess chlorine is removed by a single stage jet and passes to the venturi scrubber and to emission point 00016.

For each batch of phosphorous pentachloride produced, the scrubber liquor must contain a minimum concentration of 1% caustic. Prior to the start of each batch, the concentration of caustic in the scrubber will be determined by titration. The 1% caustic will correlate to a pH of 13.1.

The caustic flow rate to the scrubber shall be maintained at a minimum 75 gpm except when packaging phosphorus pentachloride. A pressure sensing device, with an alarm set point of 10 psi, to detect loss of caustic flow to the scrubber circulation system will be maintained as necessary in good working order.

Prior to each batch, the vessel, chlorine lines, and vaporizer will be pressure tested to 60 psig. All lines and valves will be visually checked for signs of corrosion and wear.

Yearly, the reactor will be disassembled and the interior visually inspected for corrosion, erosion, and cracking.

Yearly, the chlorine vaporizer will be disassembled and cleaned and the interior visually inspected for corrosion, erosion, and wear. All joints will be leak tested using soap and water. The unit will be kept free of moisture during the testing process.

Yearly, reactor pressure relief devices shall be cleaned



and inspected for signs of wear and corrosion. They shall be tested to 75% of rupture pressure.

Monitoring parameter readings for the scrubber and inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur.

The permittee will investigate, in a timely manner, any instance where there is cause to believe that instances including but not limited to process upsets, control device malfunctions or problems, visible emissions, or complaints have occurred. The permittee shall determine the cause of any exceedance, make the necessary correction, and verify that the excess emissions problem has been corrected. 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.

Records of verifications, investigations and corrective actions are to be kept on-site in a format acceptable to the Department for a period of 5 years.

All deviations from normal operating ranges are to be noted and included in an annual report submitted to the NYSDEC Region 9 office under a truthfulness and accuracy statement. If no deviations from normal operating parameter ranges are found, a report shall be submitted stating so.

Parameter Monitored: SODIUM HYDROXIDE  
Lower Permit Limit: 1 percent  
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 1/30/2015.  
Subsequent reports are due every 12 calendar month(s).

**Condition 10: Compliance Demonstration**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable Federal Requirement: 6 NYCRR 212.4 (b)**

**Item 10.1:**  
The Compliance Demonstration activity will be performed for:



Emission Unit: 0-00001  
Process: 108

Emission Point: 00019

Regulated Contaminant(s):  
CAS No: 007647-01-0 HYDROGEN CHLORIDE  
CAS No: 000075-44-5 PHOSGENE

**Item 10.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

Process 108 represents the emergency scrubber physically located in building 23 which draws air from the building 4 phosgene supply room in the event of a release and to emission point 00019. In the event of a phosgene alarm at 0.25 ppm, the scrubber will be automatically activated.

The emergency scrubber is charged with 6% caustic and the concentration is to be tested monthly to demonstrate this concentration.

The phosgene monitor shall be calibrated according to manufacturer's instructions and tested monthly. At a minimum, the electrochemical sensor shall be replaced yearly. The date of sensor change shall be recorded and submitted to this Department on an annual basis.

The scrubber and associated components and mechanical systems are to be inspected and maintained according to the schedule outlined as follows:

Yearly

An internal inspection of the scrubber and packing material shall be conducted yearly for signs of:

1. Corrosion and erosion
2. Solids deposits in packed beds or tray orifices
3. Solids accumulation in mist eliminators
4. Worn packing
5. Scrubber circulating pumps shall be tested and inspected
6. Associated pumps shall be inspected yearly and checked for wear
7. A spare pump is to be kept in-house and in working condition and tested yearly
8. Piping 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 wear, erosion and



corrosion. Lines will be pressure checked. Pipe joints will be checked using soap and water.

All incidents of emergency scrubber usage and the reason are to be entered in a log book kept on-site and made available to Department representatives on-request. In addition, these are to be included in a deviation report submitted to the NYSDEC Region 9 office under a truthfulness and accuracy statement at the end of each calendar year. If no deviations from normal operating parameter ranges are found, a report shall be submitted stating so.

Parameter Monitored: SODIUM HYDROXIDE  
Lower Permit Limit: 6 percent  
Monitoring Frequency: MONTHLY  
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 1/30/2015.  
Subsequent reports are due every 12 calendar month(s).

**Condition 11: Compliance Demonstration**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable Federal Requirement: 6 NYCRR 212.4 (b)**

**Item 11.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: 0-00001

Emission Point: 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 11.2:**

Compliance Demonstration shall include the following monitoring:

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

Monitoring Description:

The emissions of phosgene (COCL<sub>2</sub>) and thionyl chloride (SOCL<sub>2</sub>) from process batch reactors associated with the manufacture of acid chlorides in batch reactors require a minimum 99% control. These emissions will initially pass through the packed caustic scrubbers located in building 1 and building 2. The caustic solution converts these



gases to hydrogen chloride and sulfur dioxide and along with any residual phosgene and thionyl chloride, these emissions will then pass through a third countercurrent flow packed tower (finishing) scrubber, emission point 00020.

The initial caustic charge into the finishing scrubber will be 6% by weight as determined by titration and shall not fall below a minimum of 3% during phosgene addition. Titration is to occur and readings are to be taken and recorded every 4 hours during phosgene addition. The spent (3%) caustic solution is then transferred to the building 1 or building 2 scrubbers. These scrubbers shall circulate the caustic solution until the pH drops below 9 and the spent caustic solution shall then be discharged.

The caustic flow rate to the finishing scrubber is to be monitored and recorded every 4 hours and shall be maintained at 60 gallons per minute.

The level of scrubber liquor in the caustic feed tank shall not drop below 140 gallons.

Twin Lake shall maintain the physical and operational integrity of the control equipment through the development and implementation of a packed tower/venturi scrubber preventive maintenance plan (PM) to include but not limited to the following:

#### Daily Inspection and Recording

Phosgene and thionyl chloride containers and systems shall be inspected daily for leaks. All phosgene equipment including valves, fittings, and connections for tightness and shall be maintained in good working order. All newly made connections shall be tested for leaks immediately after phosgene is admitted. Needed repairs and adjustments shall be made promptly.

1. visible liquid leaks
2. system gas leaks
3. abrasion, corrosion or buildup on fans, ducts, pipes

If any of these conditions exist the appropriate measures for remediation shall be undertaken within 24 hours.

#### Weekly

The diesel generator to power the scrubbers in event of a



power outage is to be maintained in good working order and tested weekly. Preventive maintenance (PM) is to be performed twice per year and records kept of the date of PM.

#### Monthly

Phosgene and thionyl chloride piping and associated components and supports are to be inspected monthly. The lines and valves are to be visually checked and with an ammonia soaked cloth. Lines are to be checked for corrosion and deterioration of coating. Copper tubing is to be inspected for damage and valves are to be inspected for positive shut-off.

pH meters are to be calibrated and tested monthly.

#### Semi-annually

1. Phosgene perimeter alarms and monitors shall be tested and calibrated according to manufacturers specifications.
2. pH meters are to be calibrated
3. Scrubber circulating pumps shall be tested and inspected
4. Emergency shutdown system shall be inspected and tested
5. Temperature instrumentation shall be calibrated for all reactors
6. Pressure instrumentation shall be inspected

#### Yearly

An internal inspection of the scrubber(s) and packing material shall be conducted yearly for signs of:

1. corrosion and erosion
2. solids deposits in packed beds or tray orifices
3. solids accumulation in mist eliminators
4. worn packing
5. The associated pumps shall be inspected yearly and checked for wear
6. A spare pump is to be kept in-house and in working condition and tested yearly
7. 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 to 150 psig. Pipe joints will be checked using



soap and water.

8. Reactor pressure relief devices shall be cleaned and inspected for signs of wear and corrosion. They shall be tested to 75% of rupture pressure.

The lower detection limit of the phosgene monitor is 0.01 ppm. Basic PM shall be conducted on the monitors every 12 months and a comprehensive inspection shall be conducted every 2 years including replacement of sensors, pumps, internal battery packs, generator cell, and charcoal filters.

Records are to be maintained in a bound book and are to include dates of inspections, calibrations, and conditions requiring corrective actions along with completion dates of the corrective actions taken. These records and other data recorded during inspections of the scrubbers shall be retained in company files for a period of not less than five years and shall be made available to Department representatives for review during normal business hours.

All deviations from normal operating ranges and malfunctions are to be noted and included in an annual report submitted to the NYSDEC Region 9 office under a truthfulness and accuracy statement. If no deviations from normal operating parameter ranges are found, a report shall be submitted stating so.

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 - SEE MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2015.

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



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

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

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

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

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

**STATE ONLY APPLICABLE REQUIREMENTS**

**The following conditions are state only enforceable.**

**Condition 12: Contaminant List**  
**Effective between the dates of 10/16/2014 and 10/15/2019**



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

**Item 12.1:**

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

CAS No: 000067-66-3  
Name: CHLOROFORM

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

CAS No: 000075-44-5  
Name: PHOSGENE

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: 007782-50-5  
Name: CHLORINE

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

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

**Condition 13: Malfunctions and start-up/shutdown activities**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

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

**Item 13.1:**

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

(b) The facility owner or operator shall compile and maintain records of all equipment



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

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

(d) The department may also require the owner or operator to include, in reports described under Subdivisions (b) and (c) of this Section, an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions.

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

**Condition 14: Emission Unit Definition**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable State Requirement:6 NYCRR Subpart 201-5**

**Item 14.1:**

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 15: Renewal deadlines for state facility permits**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

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



**Item 15.1:**

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

**Condition 16: Compliance Demonstration**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

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

**Item 16.1:**

The Compliance Demonstration activity will be performed for the Facility.

**Item 16.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

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

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

Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 1/30/2015.  
Subsequent reports are due every 12 calendar month(s).

**Condition 17: Visible Emissions Limited**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable State Requirement:6 NYCRR 211.2**

**Item 17.1:**

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

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

**Condition 18: Emission Point Definition By Emission Unit**  
**Effective between the dates of 10/16/2014 and 10/15/2019**



**Applicable State Requirement:6 NYCRR Subpart 201-5**

**Item 18.1:**

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 19: Process Definition By Emission Unit**  
**Effective between the dates of 10/16/2014 and 10/15/2019**

**Applicable State Requirement:6 NYCRR Subpart 201-5**

**Item 19.1:**

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 & thionyl chloride. Emissions of hydrogen chloride, thionyl chloride & sulfur dioxide are first directed to two packed tower scrubbers (emission sources 00011 & 00015) re-circulating caustic solution (Thionyl scrubbers 1 & 2). Gases from these scrubbers are then vented to the finishing scrubber, EP 00020. When charging trimellitic anhydride powder to the reactor a



combination venturi-packed tower scrubber (EP 00012) is used to control dust.

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

Emission Source/Control: 0010A - Process

Emission Source/Control: 0010B - Process

**Item 19.2:**

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. Emissions are vented to a packed column scrubber (phosgene scrubber ES 00010) recirculating caustic solution and then to emission point 00020, the finishing scrubber. When charging solids to the reactor a venturi scrubber (EP 00012) is used to control dust.

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

Emission Source/Control: 0010C - Process

**Item 19.3:**



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 from the reaction of phosgene and trimellitic monoacid chloride. Vent gases of phosgene and carbon dioxide are controlled with a packed column scrubber recirculating caustic solution (emission source 00010) and to final finishing scrubber emission point 00020. Particulates generated during charging are controlled by the building 1 venturi-packed tower combination scrubber, emission point 12.

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: 00020 - Control

Control Type: PACKED GAS ABSORPTION SYSTEM, GAS SCRUBBER (GENERAL, NOT CLASSIFIED)

Emission Source/Control: 00102 - Process

**Item 19.4:**

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 phosgene. Emissions are first directed to a packed column scrubber (ES 014) recirculating caustic solution and then to a finishing scrubber, EP 00020. When charging IPA powder to the reactor a venturi scrubber (ES 016) is used to control dust.

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 19.5:**

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 and phosgene. Vent gases are directed first to a packed column scrubber (ES 00014) recirculating caustic soda solution and a finishing scrubber, emission point 00020. When charging the reactor, a venturi scrubber (EP 00016) is used to control phthalic anhydride dust.

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 19.6:**

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 from phosphorous trichloride(PCL3) and chlorine. During the reaction, the reactor is not vented. After the reaction is complete, the reactor is placed under vacuum. Excess chlorine, PCL5, and PCL3 are controlled by a venturi-packed tower scrubber, emission point 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 19.7:**

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 in a totally enclosed flaker. A combination venturi-packed scrubber, emission point 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: 0012A - Process

**Item 19.8:**

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 are directed to the air strippers and emission points 00017 & 00018. The 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 19.9:**

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, the emergency scrubber draws air from the building floor and passes through a packed scrubber with a countercurrent flow of caustic solution and 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

