



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

Facility Identification Data

Name: OCCIDENTAL CHEMICAL CORP - NIAGARA PLANT

Address: BUFFALO AVE AND 47TH ST

NIAGARA FALLS, NY 14302-0344

Owner/Firm

Name: OCCIDENTAL CHEMICAL CORP

Address: 5005 LBJ FREEWAY

DALLAS, TX 75244, USA

Owner Classification: Corporation/Partnership

Permit Contacts

Division of Environmental Permits:

Name: DENISE C MATTHEWS

Address: 270 MICHIGAN AVE

BUFFALO, NY 14203-2915

Phone: 7168517165

Division of Air Resources:

Name: DONNA F KIERSZ

Address: NYSDEC

270 MICHIGAN AVE

BUFFALO, NY 14203-2915

Phone: 7168517130

Air Permitting Contact:

Name: JAMES J CZAPLA

Address: OCCIDENTAL CHEMICAL CORPORATION

PO BOX 344

NIAGARA FALLS, NY 14302-0344

Phone: 7162787534

Permit Description

Introduction

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

Summary Description of Proposed Project

Application for renewal of Air Title V Facility. Renewal includes a permit modification regarding the addition of hydrochloric (HCl) acid synthesis and HCl acid concentration, proofing, and storage processes to Occidental Chemical Company's Niagara Plant chlorine/caustic production. Renewal also includes the installation of two emergency backup diesel powered generators as part of Emission Unit C-00001 ("C")



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

Area Chlor-Alkali Process Scrubbers). One generator was added to each of the two main emergency scrubber processes, C02 (Circuit No. 1 Header Seal Emergency Scrubber) and C04 (Circuit No. 2 Header Seal Emergency Scrubber).

Attainment Status

OCCIDENTAL CHEMICAL CORP - NIAGARA PLANT is located in the town of NIAGARA FALLS in the county of NIAGARA.

The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

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

* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.

** NOx has a separate ambient air quality standard in addition to being an ozone precursor.

Facility Description:

Occidental Chemical Corporation's Niagara Falls Facility currently consists of two main sections: chlorine/caustic production and Dechlorane Plus production/Remedial Areas. Each of these two main sections is covered by a separate Title V Permit. The other specialty chemicals facilities and liquid waste incinerator formerly operated by the facility have been shut down and demolished, and the plant remedial activities which were previously included in the chlorine/caustic production permit are now grouped with the Dechlorane Plus production activities. This permit application is for the chlorine/caustic production portion of the facility. Permit application 9-2911-00112/00234 is for the Dechlorane Plus production/Remedial Areas portion.

Air emission points are associated with both the production area and the support facilities for the chlorine/caustic portion of the facility as follows:

A. Chlorine and Caustic - Chemicals produced in this area include but are not limited to the following:

1. Chlorine
2. Sodium Hydroxide
3. Hydrogen
4. Sodium Hypochlorite
5. Gypsum (by-product)
6. Hydrogen Chloride.

B. Support Facilities include:



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

1. Waste Storage (< 90 days)
2. General Building Ventilation Systems
3. Product Loading/Packaging
4. Maintenance Facilities
5. Cell Reconstruction
6. Cooling Towers
7. Portable Scrubbers.

Emission units associated with plant operations are as follows:

- B-00001 Chlor-Alkali Hydrogen vents
- B-00002 Chlor-Alkali Process Acid Storage Tanks
- B-00003 Chlor-Alkali Process Miscellaneous
- C-00001 "C" Area Chlor-Alkali Process Scrubbers
- C-00006 HCl Acid Synthesis and Storage Unit
- E-00001 HCl Acid Scrubber Vent
- H-00001 "H" Area Chlor-Alkali Process Scrubbers
- I-00001 Bulk Material Storage Building Ventilation Systems
- J-00001 Chlor-Alkali Process Cell Construction
- Z-00001 Facility Refrigeration Systems
- Z-00002 Facility Fugitive Emissions
- Z-00003 Transfer Operations
- Z-00004 Miscellaneous Exempt Combustion Sources.

This permit renewal includes a modification regarding the addition of HCl acid synthesis and HCl concentration, proofing, and storage processes to the existing chlorine/caustic production portion of the facility.

The renewal also includes the installation of two emergency backup diesel powered generators as part of Emission Unit C-00001 ("C" Area Chlor-Alkali Process Scrubbers). One generator was added to each of the two main emergency scrubber processes, C02 (Circuit No. 1 Header Seal Emergency Scrubber) and C04 (Circuit No. 2 Header Seal Emergency Scrubber).

6 NYCRR Part 201-7.1 governs facility-wide emission limits (addressed in DEC ID 9-2911-00112/00234) for Total HAPs, perchloroethylene, hexachlorocyclopentadiene, and hydrogen chloride to cap the facility out of major status for the applicability of 40 CFR 63 Subpart FFFF. The following is a list of Emission Units that contribute to each emission cap:

Total HAPs

Permit 233: B-00002, C-00001, C-00006, E-00001, J-00001, Z-00002, Z-00003, Z-00004

Permit 234: A-00002, A-00003, A-00009, D-00002, F-00001, M-00002, M-00003.

The individual HAPs which contribute to total HAP emissions include the three HAPs for which individual caps are included in this permit (perchloroethylene, hexachlorocyclopentadiene, and hydrogen chloride) as well as other HAPs for which potential emissions are below the individual 10 tons/year threshold (including but not limited to chlorine, asbestos, benzene, hydrogen fluoride, and lead).

Perchloroethylene

Permit 233: Z-00003

Permit 234: A-00002, A-00003, D-00002, M-00002, M-00003.



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

Hexachlorocyclopentadiene

Permit 233: Z-00003

Permit 234: A-00002, A-00003, D-00002, M-00002, M-00003.

Hydrogen Chloride

Permit 233: B-00002, C-00001, C-00006, E-00001, Z-00002, Z-00003

Permit 234: A-00003, F-00001.

HCl emissions from Permit 234 sources are minor and are tracked for EU F-00001 - "F" Area Ground Water Storage and Treatment System through records of quantities and chemical analyses of groundwater that is processed and for EU A-00003 - Portable/Semi-Permanent Vacuum Units through records of material processed. HCl emissions from Permit 233 sources associated with the HCl Synthesis Unit (Emission Units C-00006 and E-00001) are primarily limited by the control efficiency and emission rate limitations of the "C" Area, "E" Area and Tails Tower Scrubbers as well as the "E" Area loading and unloading limit of 163,000 tons per year of acid as specified in permit conditions cited under 6 NYCRR Part 212.9(b). Additional permit conditions address specific operating requirements for these scrubbers, as well as for existing scrubbers in Emission Units B-00002 and C-00001. Scrubber liquor characteristics such as temperature, specific gravity, and concentration, and operating parameters such as scrubber liquor flow rate and pump pressure are monitored and adjusted as needed to maintain operation within established ranges. The facility implements an extensive program of standard operating and maintenance procedures to ensure permit compliance. Compliance with these conditions and procedures ensures that the 9.9 tons per year emissions cap is not exceeded.

The facility has submitted a Notification of Non-Applicability for 40 CFR 63 Subpart VVVVVV, National Emissions Standards for Hazardous Air Pollutants Area Source Standards for Chemical Manufacturing, by letter dated August 20, 2012. In February 2012 they had determined they were subject to certain requirements due to their use of nickel chloride, a catalyst which triggered rule applicability, and submitted an initial notification. Since February 2012 the facility has successfully eliminated this catalyst from their process and is no longer subject to the rule.

Permit Structure and Description of Operations

The Title V permit for OCCIDENTAL CHEMICAL CORP - NIAGARA PLANT

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

- combustion - devices which burn fuel to generate heat, steam or power
- incinerator - devices which burn waste material for disposal
- control - emission control devices
- process - any device or contrivance which may emit air contaminants that is not included in the above categories.



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

OCCIDENTAL CHEMICAL CORP - NIAGARA PLANT is defined by the following emission unit(s):

Emission unit B00001 - Chlor-Alkali Hydrogen Vents

Hydrogen is produced by the electrolysis of brine in the No. 1 and No. 2 cell rooms using H4 diaphragm cells. Heat from the hydrogen is used to warm the incoming brine. The hydrogen cooler is a direct contact spray tower (Note: Brine is sprayed directly into the hot hydrogen stream). Under normal operation, the hydrogen is compressed and piped to local manufacturers. Hydrogen is also consumed in the facility's new HCl Acid Synthesis process in EU C-00006. The hydrogen that can not be consumed is automatically vented through the hydrogen vent EPBR001.

Additional hydrogen venting can also occur as follows:

- 1) EP-B2405 and EP-B1801 (No.1 and No.2 compressor automatic hydrogen vents): Hydrogen vents through an automatic valve at the discharge of each compressor to maintain pressure and avoid pressure increase that could overload a compressor motor or a pressure decrease that would draw in air;
- 2) EP-B2402 and EP-B2403 (No. 1 Cell Room seal vent stacks) : The hydrogen gas stream is maintained at a slight positive pressure to prevent influx of air. If excessive pressure is reached in the hydrogen discharge piping from the cells, the water or brine seal will blow and hydrogen will be vented to the atmosphere;
- 3) EPB2503 (No. 2 cell room seal vent stack): The hydrogen gas stream is maintained at a slight positive pressure to prevent influx of air. If excessive pressure is reached in the hydrogen discharge piping from the cells, the water or brine seal will blow and hydrogen will be vented to the atmosphere;
- 4) EP-B2404 and EP-B2504 (No. 1 and No. 2 Cell Room low pressure hydrogen vents): Low pressure hydrogen vents are utilized to vent hydrogen that cannot be handled by the process (Note: Normally about 5 percent of production). Hydrogen is vented when the hydrogen cooling/compression system is down for maintenance, startup or shutdown.

Notes:

- 1) Hydrogen emissions are trivial activities per 6 NYCRR Part 201-3.3(c)(94).
- 2) A negligible amount of sodium chloride/sodium hydroxide is entrained as particulates with the hydrogen gas.

Emission unit B00001 is associated with the following emission points (EP):

B1801, B2402, B2403, B2404, B2405, B2503, B2504, BR001

Process: B01 is located at Building B18 -

Hydrogen is produced in No. 1 and No. 2 diaphragm cell circuits via the electrolysis of brine. The gas is maintained at a slight positive pressure to prevent influx of air. Both circuit hydrogen headers are equipped with water or brine seals for pressure relief. During high pressure upsets, the hydrogen is vented to the atmosphere. The hydrogen is passed through direct contact brine spray coolers. The two hydrogen streams are then compressed and sent to customers, consumed onsite, or vented to the atmosphere. A negligible amount of sodium chloride/sodium hydroxide is entrained as particulates with the hydrogen gas.

Emission unit B00002 - Chlor-Alkali Process Acid Storage Tanks

The chlor-alkali process utilizes both sulfuric acid and aqueous hydrochloric acid. The sulfuric acid (98%), used for chlorine drying, is delivered to the plant in bulk shipments. During filling of the plant storage tanks, displaced air is emitted to the atmosphere. No provisions are provided for controlling these intermittent emissions.



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

Aqueous Hydrochloric Acid (<37%) is utilized to neutralize excess NaOH and Na₂CO₃ in the cell feed brine, and brine sludge acidification to remove Na₂SO₄ and recover CO₂. Dilute HCl is used to clean cell parts. This acid is either produced at the Niagara Plant or shipped in from offsite and is transferred into Chlor-Alkali storage tanks as required. Tank vents are routed to the cell liquor sump where a spray of cell liquor (NaOH and NaCl) is utilized to scrub out and neutralize any HCl contained in the gas stream.

Emission unit B00002 is associated with the following emission points (EP):

B1901, B1902, B2502

Process: B02 is located at Building N OF B19 -

Sulfuric acid (98%) is shipped to the Niagara Plant in bulk shipments (primarily by tank trucks). During filling of the plant storage tanks, displaced air from the tanks is emitted to the atmosphere. The acid is used primarily for chlorine gas drying in the chlor-alkali process. There is no provision for controlling the intermittent emissions from these tanks.

Process: B03 is located at Building B25 -

Aqueous Hydrochloric Acid (<37%) is utilized to neutralize excess NaOH and Na₂CO₃ in the cell feed brine, and brine sludge acidification to remove Na₂SO₄ and recover CO₂. Dilute HCl is used to clean cell parts. This acid is either produced at the Niagara Plant or shipped in from offsite and is transferred into Chlor-Alkali storage tanks as required. Tank vents are routed to the cell liquor sump where a spray of cell liquor (NaOH and NaCl) is utilized to scrub out and neutralize any HCl contained in the gas stream.

Emission unit B00003 - Chlor-Alkali Process Miscellaneous

This emission unit contains emission points, emission sources, and processes which support the Chlor-Alkali Process but are not part of the five main chlor-alkali production emission units (B-00001, B-00002, C-00001, H-00001, and J-00001). Process B04 encompasses the chlorine liquefaction refrigeration systems and the associated OXSOL coolant storage tank. Process B05 encompasses the caustic concentration, purification and storage systems which handle the cell liquor resulting from the electrolysis of brine. Cell liquor at 12-15% NaOH is evaporated to 50% and stored in a series of tanks.

Emission unit B00003 is associated with the following emission points (EP):

B0501, B0502, B0503, B0504, B0505, B0506, B0507, B0508, B1903

Process: B04

The chlor-alkali process utilizes OXSOL 1000 (3,4-dichlorobenzotrifluoride) as the heat transfer material in the Cell No. 1 and Cell No. 2 liquefaction plant's cooling systems.

Process: B05

Sodium hydroxide is produced in the H-4 Chlor-Alkali Process diaphragm cell circuits via the electrolysis of brine. The cell liquor resulting from this process contains approximately 12-15% caustic and roughly an equivalent amount of unreacted NaCl. The liquor is evaporated up to 50 percent caustic using a quadruple effect evaporator system. The caustic is then cooled using non contact cooling. During the evaporation and cooling steps, additional salt crystallizes and is removed using settling, centrifuge and filtration. The concentration, purification, and storage of the caustic includes a number of tanks which are vented to the atmosphere. The utilization of these tanks results in the emission of small quantities of particulates consisting of Sodium Hydroxide and Sodium Chloride.



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

Emission unit C00001 - "C" Area Chlor-Alkali Process Scrubbers

The "C" Area Chlor-Alkali process scrubbers are utilized to scrub out and neutralize chlorine contained in the off gas vent streams from several sources within the No. 1 and No. 2 Chlor-Alkali Process Cell Rooms. These vents include the following:

- 1) Vent gas from No. 1 and No. 2 chlorine liquefaction facilities
- 2) Vent from waste sulfuric acid storage tanks
- 3) Blow down from tank car unloading facilities
- 4) Off gas from bleach reactor and vent from bleach storage tank
- 5) Off gases from purging equipment involved with chlorine handling systems prior to implementing maintenance procedures
- 6) Emergency chlorine header seal blow vents from No. 1 and No. 2 Circuits (B Area)

The emission points contained in this emission unit include the following:

- 1) C0612: Scrubbed gases from the sparge tanks, waste sulfuric acid trailer loading system, and the waste sulfuric acid storage tanks vents which are tied into a spray tower (West After Scrubber). The spray tower removes any chlorine that may have passed through the sparge tanks. Emissions from the trailer and acid tanks are negligible. This system operates in conjunction with emission point C3101.
- 2) C3101: Scrubbed gases from the sparge tanks, one bleach reactor, and one bleach storage tank are passed through a spray tower (East After Scrubber). The spray tower removes any chlorine that may have passed through the sparge tanks or is vented from the bleach reactor or storage tank. This system operates in conjunction with emission point C0612.
- 3) C3410: This vent is the exit from a vent scrubber (Cell Brine Head Tank Scrubber) that is scrubbing CO₂, HCl and Cl₂ gases from the brine head tank vent. Alkaline sodium chloride brine is the scrubbing liquid. Alkaline brine contact removes the CO₂ and a small amount of HCl and Cl₂. The scrubber liquid is returned to the process.
- 4) C0613 (No. 1 EVS) and C3102 (No. 2 EVS): Emergency scrubbers for No.1 and No. 2 Chlorine header seal blows.

It should be noted that the tanks associated with emission points C0612 and C3101 are interchangeable and the process can operate with one After Scrubber (East or West) (caustic scrubbers associated with these emission points) down for maintenance.

Two emergency generators (ES-C0204 and ES-C0404) provide backup power for the Circuits No. 1 and 2 Header Seal Emergency Scrubbers.

Emission unit C00001 is associated with the following emission points (EP):

B33A1, C0612, C0613, C3101, C3102, C3410, C50A1

Process: C01

The vent gases from the final step of the chlorine liquefaction processes are sparged into one or more of the six vent absorber tanks. These tanks contain sodium hydroxide and catalyst (note: aids in decomposition of hypochlorite). Off gases from these absorbers are vented to a spray scrubber which also uses an alkaline solution to scrub out any remaining chlorine prior to discharge into the atmosphere. Vents from the chlorine storages, and tank car blow down are also sparged into one of the six vent absorber tanks. In addition vents from the intermittent sources such as the waste sulfuric acid storage tanks, waste sulfuric acid trailer and tank car loading and equipment evacuations prior to maintenance are vented directly to the spray scrubber. Also, the bleach reactor and bleach storage tanks can be vented directly to the spray scrubber. The above sources operate in conjunction with Process Unit C03 Chlorine Scrubbing, East After Scrubber.



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

It should be noted that the tanks associated with emission points C0612 and C3101 are interchangeable and the process can operate with one After Scrubber (East or West) (caustic scrubbers associated with these emission points) down for maintenance.

Process: C02

The chlor-alkali circuit No. 1 contains a water seal on the main chlorine header. If an emergency occurs with the resultant excessive pressure, the seal is blown and the chlorine is routed to an emergency scrubber. A caustic solution neutralizes the chlorine released to the scrubber during periods of excessive system pressure. In addition, this scrubber, in the future, may occasionally be utilized to remove chlorine from miscellaneous vent streams.

A diesel powered emergency backup generator, ES-C0204, provides backup power to the Circuit No. 1 Header Seal Emergency Scrubber (ES-C0203).

Process: C03

The vent gases from the final step of the chlorine liquefaction processes are sparged into one or more of the six vent absorber tanks. These tanks contain sodium hydroxide and catalyst (note: aids in decomposition of hypochlorite). Off gases from these absorbers are vented to a spray scrubber which also uses an alkaline solution to scrub out any remaining chlorine prior to discharge into the atmosphere. Vents from the chlorine storages and tank car blow down are also sparged into one of the six vent absorber tanks. In addition vents from the bleach reactor and bleach storage tanks are vented directly to the spray scrubber. Also the intermittent sources such as the waste sulfuric acid storage tanks, waste sulfuric acid trailer and tank car loading and equipment evacuations prior to maintenance are vented directly to the spray scrubber. The above sources operate in conjunction with Process Unit C01- Chlorine Scrubbing, West After Scrubber.

It should be noted that the tanks associated with emission points C0612 and C3101 are interchangeable and the process can operate with one After Scrubber (East or West) (caustic scrubbers associated with these emission points) down for maintenance.

Process: C04

The chlor-alkali circuit No. 2 contains a water seal on the main chlorine header. If an emergency occurs with resultant excessive pressure, the seal is blown and the chlorine is routed to an emergency scrubber. A caustic solution neutralizes the chlorine released to the scrubber during periods of excessive system pressure. In addition, the scrubber in the future may occasionally be utilized to remove chlorine from miscellaneous vent streams.

A diesel powered emergency backup generator, ES-C0404, provides backup power to the Circuit No. 1 Header Seal Emergency Scrubber (ES-C0403).

Process: C05

Either alkaline brine or acidic brine can be used in the chlorine production process. When it is desirable to use acidic brine, brine is acidified in the brine head tank using hydrochloric acid. During the acidizing process, carbon dioxide and small quantities of both hydrochloric acid and chlorine may be liberated. A spray type scrubber is utilized when adding acid to brine to scrub the vent from the brine head tank using alkaline brine. The scrubber exit brine is returned to the process. On occasion condensate could be used as a substitute for the brine.



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

Emission unit C00006 - HCl Acid Synthesis and Storage Unit

HCl Acid Synthesis and Storage unit consists of a Chlorine Vaporizer, an HCl Combustion Unit with integrated Acid Absorber, and a Tails Tower. HCl (hydrogen chloride) is produced by the combustion of chlorine (Cl₂) and hydrogen (H₂) gas. An excess of approximately 15% H₂ is used to insure that all the chlorine is consumed. The combustion unit is immediately followed by an integrated acid absorbing unit. The acid absorber uses weak acid from both the tails tower and the storage tank scrubbers as the absorbing medium, producing 163,000 tons per year of 35.2% HCl. Following the absorber, the excess H₂ is vented to the atmosphere through the Tails Tower, a packed tower scrubber, that will reduce the emissions of HCl.

The 35.2% acid will be collected in a 1700 gallon pump tank and then transferred to one of two 55,000 gallon proof tanks. The product will be held in the proof tanks for concentration adjustment and quality checks. Acid will then be transferred to the two 210,000 gallon product storage tanks before loading and shipping. All the vessels in the HCl synthesis and storage unit are vented to packed tower scrubbers for acid gas control.

Potential annual hydrogen chloride emissions associated with the HCl Acid Synthesis Project are primarily due to the Tails Tower Vent, the "C" Scrubber, and the "E" Scrubber. Controlled annual potential emissions, based on 99.5% scrubber efficiency and 8,760 hours of operation per year, are 4.2 tons.

Emission unit C00006 is associated with the following emission points (EP):

C5101, C5102, C5103

Process: C25 is located at Building C51 - The Hydrochloric Acid (HCl) Synthesis Process consists of a Chlorine Vaporizer, an HCl Combustion Unit (ES-C2501) with integrated Acid Absorber (ES-C2502), and a Tails Tower (ES-C2503). HCl is produced by the combustion of chlorine (Cl₂) and hydrogen (H₂) gas. An excess of H₂ is used to insure that all the chlorine is consumed. The combustion unit is immediately followed by an integrated acid absorbing unit. The acid absorber uses weak acid from both the tails tower and the storage tank scrubber as the absorbing medium, producing 163,000 tons per year of 35.2% HCl. Following the acid absorber, the excess H₂ is vented to the Tails Tower, a packed tower scrubber, that will reduce the emissions of HCl Prior to release to the atmosphere through the Tails Tower Vent (EP-C5101).

The HCl Synthesis unit also includes a rupture disc which is designed to allow the release of HCl emissions if there is a malfunction in the process. In this scenario the release of HCl and Cl₂ will pass through the rupture disc and these emissions will be collected in a surge tank (ES-C2504) and passed through a scrubber (ES-C2505) prior to being released to the atmosphere through the emergency vent (EP-C5103).

Process: C26 is located at Building C51 - 35% Hydrochloric Acid (HCl) from the synthesis unit will be collected in a 1700 gallon pump tank and then transferred to one of two 55,000 gallon proof tanks. HCl will be held in the proof tanks for concentration adjustment and quality checks. Acid will then be transferred to two 210,000 gallon product storage tanks before loading and shipping. All the HCl storage tanks are vented to a packed tower scrubber (EC-C2607) for acid gas control.



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

Emission unit E00001 - HCl Acid Scrubber Vent

A scrubber (packed tower) is utilized to remove hydrogen chloride from contaminated vapor generated by the HCl storage and unloading operations. Emission sources include the following:

- 1) Two (30,000 gallon each) Hydrochloric Acid (<37%) storage tanks,
- 2) Four Hydrochloric Acid tank car loading hoods,
- 3) Two Hydrochloric Acid tank trailer loading hoods.

The circulating scrubber liquid is a weak solution of Hydrochloric Acid (up to 20% weight percent HCl, specific gravity 1.1).

Emission unit E00001 is associated with the following emission points (EP):

E2001

Process: E01 is located at Building E2 -

Product grade hydrochloric acid (<37%) is stored in tanks (2 @ 30,000 gallons each). The HCl loading system can either load tank cars or trailers for shipment or can receive HCl from tank cars or trailers.

Vents from these storage tanks and transfer system are vented to a packed scrubber (EC-E0106) which utilizes weak acid (<20%, specific gravity 1.1) as the circulating scrubber liquid.

Emission unit H00001 - "H" Area Chlor-Alkali Process Scrubbers

Cell liquor, produced by the diaphragm cell electrolysis of the brine, typically is a 12-15 percent solution of sodium hydroxide and contains, roughly, an equivalent amount of unreacted salt. During the caustic concentration process, salt crystallizes and is removed by primary centrifuges. The salt is reslurried with water for sulfate removal and the salt is separated by the secondary centrifuges.

Emission unit H00001 is associated with the following emission points (EP):

H2401, H2402, H2403

Process: H01 is located at Building H24 -

Several process tanks contained in the caustic evaporation and salt removal process are vented to a water scrubber. These tanks include filter cake, hot surge tank, centrifuge feed, primary salt slurry, and secondary salt slurry tanks. The vents from these tanks are tied together. An exhaust fan pulls air from these vents which is contaminated with trace quantities of sodium chloride and sodium hydroxide through the scrubber system, which utilizes water sprays to remove the entrained contaminants from the gas stream.

Process: H02 is located at Building H24 -

The "H" Area salt removal centrifuges include two primary and two secondary centrifuges which remove salt from the caustic streams during the caustic concentration process. The exhaust air from the centrifuges is contaminated with small quantities of sodium chloride and sodium hydroxide. The exhaust air from the primary centrifuges is fed to a spray type scrubber to remove any entrained sodium chloride and sodium hydroxide before the air is exhausted to the atmosphere. A similar air exhaust and scrubber system is utilized with the secondary centrifuges.



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

Emission unit I00001 - Bulk Material Storage Building Ventilation System

Currently this building (T28) is used as a storage area for gypsum, product, raw material and equipment. Fans can be used to ventilate the building.

Emission unit I00001 is associated with the following emission points (EP):

I0001

Process: I04 is located at Building T28 -

One bulk material storage building (T28) is located on the south side of Buffalo Avenue at the Niagara facility. This building is vented by ventilation fans to the atmosphere. Currently, the building is used to store gypsum, product, raw materials, salt and equipment.

Emission unit J00001 - Chlor-Alkali Process Cell Construction

Diaphragms used in the electrolytic diaphragm cells have a limited life and must be renewed periodically. The cathode is stripped of the spent wet diaphragm asbestos by washing with high pressure water. The spent slurry is filtered and the wet filter cake is sent off-site for disposal at a permitted industrial landfill. The cathode is then repaired and redeposited with an asbestos diaphragm.

The dry asbestos is unwrapped in a sealed glove box. The asbestos is then sucked into a vacuum mix tank using a vacuum compressor to completely wet the asbestos. A polymer is added to the slurry prior to its vacuum deposition onto a cathode. Any asbestos entrained in the exit line from the tank is either removed in the screen prior to the centrifugal compressor or in the water discharge from the compressor. The reconstituted diaphragm is placed in a natural gas fired oven to both dry and heat the polymer which binds the asbestos coating together.

Emission unit J00001 is associated with the following emission points (EP):

J1301, J1304, J1305

Process: J01 Each H4 diaphragm cell must be periodically removed from service, disassembled, and rebuilt. One of the primary reasons for doing this is to replace the asbestos diaphragm that is attached to the cell's cathode. The first step in the diaphragm renewal is to wash the old diaphragm off the cathode with high pressure water. The removed asbestos is then dewatered and sent to an industrial landfill. The bare cathode is immersed in a bath of hydrochloric acid for rust removal, if needed. The cathode is then ready for the diaphragm depositing. A vacuum pump is utilized to transfer asbestos to the wet mix tank. The cathode is connected to the vacuum source and immersed in an asbestos slurry. The vacuum draws the slurry through the cathode and deposits the asbestos on the cathode screen. Once the depositing is complete, the cathode is allowed to air dry. Lastly, the cathode is placed in a natural gas fired oven and baked. This not only dries and hardens the asbestos diaphragm, but also fuses the polymers that bind the asbestos coating together.

Title V/Major Source Status

OCCIDENTAL CHEMICAL CORP - NIAGARA PLANT is subject to Title V requirements. This determination is based on the following information:

When the facility received its initial Title V permits, it was major for HCl and several chlorinated organic HAPs. Over the last fifteen years numerous production operations have been shut down and removed.



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

The facility is capped out of major status for the applicability of 40 CFR 63 Subpart FFFF by emissions capping in DEC ID 9-1922-00112/00234 for total HAPs, perchloroethylene, hexachlorocyclopentadiene, and hydrogen chloride.

The facility is not major for carbon dioxide or GHG (carbon dioxide equivalents) as the facility wide potential to emit for both is well below the major source threshold of 100,000 tons per year.

Program Applicability

The following chart summarizes the applicability of OCCIDENTAL CHEMICAL CORP - NIAGARA PLANT with regards to the principal air pollution regulatory programs:

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

NOTES:

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

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



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

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

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

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

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

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

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

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

Compliance Status

Facility is in compliance with all requirements.

SIC Codes

SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis

of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

New York State Department of Environmental Conservation
Permit Review Report



Permit ID: 9-2911-00112/00233
Renewal Number: 2
03/17/2014

SIC Code	Description
2812	ALKALIES AND CHLORINE
2819	INDUSTRIAL INORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

SCC Codes

SCC or Source Classification Code is a code developed and used" by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information. Each SCC represents a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

SCC Code	Description
3-01-008-01	CHEMICAL MANUFACTURING CHEMICAL MANUFACTURING - CHLORO-ALKALI PRODUCTION Liquefaction (Diaphragm Cell Process)
3-01-008-99	CHEMICAL MANUFACTURING CHEMICAL MANUFACTURING - CHLORO-ALKALI PRODUCTION Other Not Classified
3-01-011-98	CHEMICAL MANUFACTURING CHEMICAL MANUFACTURING - HYDROCHLORIC ACID Handling and Storage (99.9% Removal)
3-01-011-99	CHEMICAL MANUFACTURING CHEMICAL MANUFACTURING - HYDROCHLORIC ACID Other Not Classified
3-01-071-03	CHEMICAL MANUFACTURING CHEMICAL MANUFACTURING - HYDROGEN HYDROGEN STORAGE
3-01-830-01	CHEMICAL MANUFACTURING CHEMICAL MANUFACTURING - GENERAL PROCESSES Storage/Transfer
3-01-870-09	CHEMICAL MANUFACTURING CHEMICAL MANUFACTURING - INORGANIC CHEMICAL STORAGE (FIXED ROOF TANKS) Sulfuric Acid: Breathing Loss
3-01-870-34	CHEMICAL MANUFACTURING CHEMICAL MANUFACTURING - INORGANIC CHEMICAL STORAGE (FIXED ROOF TANKS) HYDROCHLORIC ACID: WORKING LOSS
5-04-106-21	SITE REMEDIATION SITE REMEDIATION - THERMAL DESORPTION THERMAL DESORBER: INDIRECT HEAT TRANSFER

Facility Emissions Summary

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the

New York State Department of Environmental Conservation
Permit Review Report



Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

capacity of the facility or air contamination source to emit any air contaminant, including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount of material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE Range represents an emission range for a contaminant. Any PTE quantity that is displayed represents a facility-wide emission cap or limitation for that contaminant. If no PTE quantity is displayed, the PTE Range is provided to indicate the approximate magnitude of facility-wide emissions for the specified contaminant in terms of tons per year (tpy). The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant Name	PTE	
		lbs/yr	Range
0NY508-00-0	40 CFR 60 SUBPART IIII - NMHC + NOX		>= 2.5 tpy but < 10 tpy
001332-21-4	ASBESTOS		> 0 but < 10 tpy
000071-43-2	BENZENE		> 0 but < 10 tpy
000124-38-9	CARBON DIOXIDE		>= 250 tpy but < 75,000 tpy
0NY750-00-0	CARBON DIOXIDE EQUIVALENTS		>= 250 tpy but < 75,000 tpy
000630-08-0	CARBON MONOXIDE		>= 10 tpy but < 25 tpy
007782-50-5	CHLORINE		> 0 but < 10 tpy
007647-01-0	HYDROGEN CHLORIDE		> 0 but < 10 tpy
007664-39-3	HYDROGEN FLUORIDE		> 0 but < 10 tpy
007439-92-1	LEAD		> 0 but < 10 tpy
0NY210-00-0	OXIDES OF NITROGEN		>= 2.5 tpy but < 10 tpy
0NY075-00-0	PARTICULATES		>= 2.5 tpy but < 10 tpy
000127-18-4	PERCHLOROETHYLENE		> 0 but < 10 tpy
0NY075-00-5	PM-10		>= 2.5 tpy but < 10 tpy
001310-73-2	SODIUM HYDROXIDE		> 0 but < 2.5 tpy
007446-09-5	SULFUR DIOXIDE		>= 10 tpy but < 25 tpy
007664-93-9	SULFURIC ACID		> 0 but < 2.5 tpy
007791-25-5	SULFURYL CHLORIDE		>= 2.5 tpy but < 10 tpy
0NY100-00-0	TOTAL HAP		>= 2.5 tpy but < 10 tpy
0NY998-00-0	VOC		>= 10 tpy but < 25 tpy

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

Item A: Emergency Defense - 6 NYCRR 201-1.5

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

(a) The affirmative defense of emergency shall be demonstrated through



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

properly signed, contemporaneous operating logs, or other relevant evidence that:

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

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

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

Item B: Public Access to Recordkeeping for Title V Facilities - 6 NYCRR 201-1.10(b)

The Department will make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to Section 503(e) of the Act, except for information entitled to confidential treatment pursuant to 6 NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.

Item C: Timely Application for the Renewal of Title V Permits -6 NYCRR Part 201-6.2(a)(4)

Owners and/or operators of facilities having an issued Title V permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

Item D: Certification by a Responsible Official - 6 NYCRR Part 201-6.2(d)(12)

Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official. This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Item E: Requirement to Comply With All Conditions - 6 NYCRR Part 201-6.4(a)(2)

The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

Item F: Permit Revocation, Modification, Reopening, Reissuance or Termination, and



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

Associated Information Submission Requirements - 6 NYCRR Part 201-6.4(a)(3)

This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Item G: Cessation or Reduction of Permitted Activity Not a Defense - 6 NYCRR 201-6.4(a)(5)

It shall not be a defense for a permittee in an enforcement action to claim that a cessation or reduction in the permitted activity would have been necessary in order to maintain compliance with the conditions of this permit.

Item H: Property Rights - 6 NYCRR 201-6.4(a)(6)

This permit does not convey any property rights of any sort or any exclusive privilege.

Item I: Severability - 6 NYCRR Part 201-6.4(a)(9)

If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.

Item J: Permit Shield - 6 NYCRR Part 201-6.4(g)

All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:

- i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;
- ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;
- iii. The applicable requirements of Title IV of the Act;
- iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

Item K: Reopening for Cause - 6 NYCRR Part 201-6.4(i)

This Title V permit shall be reopened and revised under any of the following circumstances:



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

- i. If additional applicable requirements under the Act become applicable where this permit's remaining term is three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 201-6.7 and Part 621.
- ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
- iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.
- iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

Item L: Permit Exclusion - ECL 19-0305

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

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

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

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

New York State Department of Environmental Conservation
Permit Review Report



Permit ID: 9-2911-00112/00233
Renewal Number: 2
03/17/2014

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

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

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

Regulatory Analysis

Location Facility/EU/EP/Process/ES	Regulation	Condition	Short Description
-- FACILITY	ECL 19-0301	64	Powers and Duties of the Department with respect to air pollution control
C-00001	40CFR 60-A	41	General provisions
C-00001	40CFR 60-IIII	42	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
FACILITY	40CFR 61-A	28	General Provisions - applicability of part 61
FACILITY	40CFR 61-FF	29	Benzene Emissions from Benzene waste operations
J-00001	40CFR 61-M	63	Asbestos standards for: asbestos mills, manufacturing operations using asbestos, and other sources
C-00001	40CFR 63-ZZZZ	43	Reciprocating Internal Combustion Engine (RICE) NESHAP
FACILITY	40CFR 68	19	Chemical accident prevention provisions
FACILITY	40CFR 68-A.10 (d)	30	Applicability
FACILITY	40CFR 82-B	31	Protection of Stratospheric Ozone - servicing of motor vehicle air conditioners



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

FACILITY	40CFR 82-F	20	Protection of Stratospheric Ozone - recycling and emissions reduction
FACILITY	40CFR 82-G	32	Protection of Stratospheric Ozone - significant new alternatives policy program
FACILITY	6NYCRR 200.6	1	Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	10	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	65	Unavoidable noncompliance and violations
C-00006/C5103/C25/C2505	6NYCRR 201-1.4	68	Unavoidable noncompliance and violations
FACILITY	6NYCRR 201-1.7	11	Recycling and Salvage
FACILITY	6NYCRR 201-1.8	12	Prohibition of reintroduction of collected contaminants to the air
FACILITY	6NYCRR 201-3.2(a)	13	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-3.3(a)	14	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6	21, 22, 33, 34	Title V Permits and the Associated Permit Conditions
C-00001	6NYCRR 201-6	40	Title V Permits and the Associated Permit Conditions
FACILITY	6NYCRR 201-6.4(a)(4)	15	General Conditions - Requirement to Provide Information
FACILITY	6NYCRR 201-6.4(a)(7)	2	General Conditions - Fees
FACILITY	6NYCRR 201-6.4(a)(8)	16	General Conditions - Right to Inspect
FACILITY	6NYCRR 201-6.4(c)	3	Recordkeeping and Reporting of Compliance Monitoring
FACILITY	6NYCRR 201-6.4(c)(2)	4	Records of Monitoring, Sampling and Measurement
FACILITY	6NYCRR 201-6.4(c)(3)(ii)	5	Reporting Requirements - Deviations and Noncompliance
FACILITY	6NYCRR 201-6.4(d)(4)	23	Compliance Schedules - Progress Reports
FACILITY	6NYCRR 201-6.4(e)	6	Compliance Certification
FACILITY	6NYCRR 201-6.4(f)(6)	17	Off Permit Changes
FACILITY	6NYCRR 202-1.1	18	Required emissions tests.
FACILITY	6NYCRR 202-2.1	7	Emission Statements - Applicability
FACILITY	6NYCRR 202-2.5	8	Emission Statements - record keeping requirements.

New York State Department of Environmental Conservation
Permit Review Report



Permit ID: 9-2911-00112/00233
Renewal Number: 2
03/17/2014

FACILITY	6NYCRR 211.1	24	General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 211.2	66, 67	General Prohibitions - visible emissions limited.
B-00001	6NYCRR 212.4 (c)	35	General Process Emission Sources - emissions from new processes and/or modifications
H-00001/H2401/H01	6NYCRR 212.4 (c)	60	General Process Emission Sources - emissions from new processes and/or modifications
H-00001/H2402/H02	6NYCRR 212.4 (c)	61	General Process Emission Sources - emissions from new processes and/or modifications
H-00001/H2403/H02	6NYCRR 212.4 (c)	62	General Process Emission Sources - emissions from new processes and/or modifications
FACILITY	6NYCRR 212.6 (a)	25	General Process Emission Sources - opacity of emissions limited
FACILITY	6NYCRR 212.9 (b)	26, 27	General Process Emission Sources - tables
B-00002/-/B02	6NYCRR 212.9 (b)	36	General Process Emission Sources - tables
B-00002/-/B03	6NYCRR 212.9 (b)	37	General Process Emission Sources - tables
B-00003/-/B05	6NYCRR 212.9 (b)	39	General Process Emission Sources - tables
C-00001/C0612/C01	6NYCRR 212.9 (b)	44	General Process Emission Sources - tables
C-00001/C0613/C02	6NYCRR 212.9 (b)	45	General Process Emission Sources - tables
C-00001/C3101/C03	6NYCRR 212.9 (b)	46	General Process Emission Sources - tables
C-00001/C3102/C04	6NYCRR 212.9 (b)	47	General Process Emission Sources - tables
C-00001/C3410/C05	6NYCRR 212.9 (b)	48	General Process Emission Sources - tables
C-00006/C5101/C25/C2503	6NYCRR 212.9 (b)	49, 50, 51	General Process Emission Sources - tables
C-00006/C5102/C26/C2607	6NYCRR 212.9 (b)	52, 53, 54	General Process Emission Sources - tables
E-00001	6NYCRR 212.9 (b)	55, 56, 57, 58, 59	General Process



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

<p>FACILITY</p> <p>B-00003/-/B04</p>	<p>6NYCRR 215.2</p> <p>6NYCRR 229.3 (e) (2) (v)</p>	<p>9</p> <p>38</p>	<p>Emission Sources - tables Open Fires - Prohibitions Volatile organic liquid storage tanks</p>
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Applicability Discussion:

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

ECL 19-0301

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

6 NYCRR 200.6

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

6 NYCRR 200.7

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

6 NYCRR 201-1.4

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

6 NYCRR 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

6 NYCRR 201-1.8

Prohibits the reintroduction of collected air contaminants to the outside air

6 NYCRR 201-3.2 (a)

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

6 NYCRR 201-3.3 (a)

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

6 NYCRR Subpart 201-6



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

This regulation applies to those terms and conditions which are subject to Title V permitting. It establishes the applicability criteria for Title V permits, the information to be included in all Title V permit applications as well as the permit content and terms of permit issuance. This rule also specifies the compliance, monitoring, recordkeeping, reporting, fee, and procedural requirements that need to be met to obtain a Title V permit, modify the permit and demonstrate conformity with applicable requirements as listed in the Title V permit. For permitting purposes, this rule specifies the need to identify and describe all emission units, processes and products in the permit application as well as providing the Department the authority to include this and any other information that it deems necessary to determine the compliance status of the facility.

6 NYCRR 201-6.4 (a) (4)

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

6 NYCRR 201-6.4 (a) (7)

This is a mandatory condition that requires the owner or operator of a facility subject to Title V requirements to pay all applicable fees associated with the emissions from their facility.

6 NYCRR 201-6.4 (a) (8)

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

6 NYCRR 201-6.4 (c)

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

6 NYCRR 201-6.4 (c) (2)

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

6 NYCRR 201-6.4 (c) (3) (ii)

This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

6 NYCRR 201-6.4 (d) (5)

This condition applies to every Title V facility subject to a compliance schedule. It requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted semiannually.



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

6 NYCRR 201-6.4 (e)

Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

6 NYCRR 201-6.4 (f) (6)

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

6 NYCRR 202-1.1

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

6 NYCRR 202-2.1

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

6 NYCRR 202-2.5

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

6 NYCRR 211.2

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

6 NYCRR 215.2

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

40 CFR Part 68

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

40 CFR Part 82, Subpart F

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

Facility Specific Requirements

In addition to Title V, OCCIDENTAL CHEMICAL CORP - NIAGARA PLANT has been determined to be subject to the following regulations:



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

40 CFR 68.10 (d)

This describes the elements of the accidental release plan that is required to be included in the application for the Title V permit of this facility. Certain manufacturing processes are subject to these requirements as well as processes subject to OSHA 's safety management standards.

40 CFR Part 60, Subpart A

This regulation contains the General Provisions of 40 CFR 60. The facility owner is responsible for reviewing these general provisions in detail and complying with all applicable technical, administrative and reporting requirements

40 CFR Part 60, Subpart III

This regulation addresses the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines. It covers the two identical 619 HP (461 kW) Caterpillar Model C15 diesel powered emergency generators (Model Year 2010, displacement 2.53 liters/cylinder, EPA Tier 3, Emergency Stationary) which were installed in 2011 to provide backup power for the Circuit Nos. 1 and 2 Header Seal Emergency Scrubbers.

The two units are EPA Tier 3 Emissions Certified. The following emission standards apply: 4.0 g/kW-hr NMHC + NO_x; 3.5 g/kW-hr Carbon Monoxide; 0.2 g/kW-hr Particulate Matter. Fuel must meet the requirements for non-road diesel fuel, as follows: (a) a maximum sulfur content of 15 ppm; and (b) a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

These diesel engines will be operated only for testing and maintenance of the engines, and during emergency situations. The engines will be operated and maintained in accordance with manufacturer instructions and records will be maintained of manufacturer emission certifications and maintenance conducted on the engines. A logbook will be maintained which includes hours of operation, recorded through a non-resettable hour meter, and reason for operation.

Most of the general provisions of 40 CFR 60 Subpart 60 A apply to Subpart III. General notification and reporting requirements apply to rebuilding the engine or changing emission related settings in a way that is not permitted by the manufacturer.

In 2013 the two units were operated only for testing and maintenance purposes. Using AP-42-based emission factors, annual emissions in units of tons per year were as follows: carbon monoxide - 0.124; nitrogen oxides - 0.576; particulate matter - 0.0409; sulfur oxides - 0.0381; total VOCs - 0.0459; xylene - 3.73E-05; formaldehyde - 1.54E-04.

40 CFR Part 61, Subpart A

This regulation, 40 CFR 61 Subpart A, lists the general provisions that a facility subject to a National Emissions Standard for Hazardous Air Pollutant is subject to.

40 CFR Part 61, Subpart FF

This Subpart regulates the emission standards for benzene waste operations.



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

40 CFR Part 61, Subpart M

This is the National Emission Standard for Asbestos and it includes provisions for handling and disposing of asbestos.

40 CFR Part 63, Subpart ZZZZ

This regulation addresses the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. It covers the two identical 619 HP (461 kW) Caterpillar Model C15 diesel powered emergency generators (Model Year 2010, displacement 2.53 liters/cylinder, EPA Tier 3, Emergency Stationary) which were installed in 2011 to provide backup power for the Circuit Nos. 1 and 2 Header Seal Emergency Scrubbers.

These diesel engines will be operated only for testing and maintenance of the engines, and during emergency situations. The engines will be operated and maintained in accordance with manufacturer instructions and records will be maintained of manufacturer emission certifications and maintenance conducted on the engines. A logbook will be maintained which includes hours of operation, recorded through a non-resettable hour meter, and reason for operation.

As stated in 40 CFR 63.6590(c)(1), new stationary RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR 60 Subpart IIII, as specified elsewhere in this permit. No further requirements apply for such engines under 40 CFR 63 Subpart ZZZZ.

40 CFR Part 82, Subpart B

Subpart B of 40 CFR Part 82 implements section 609 of the Clean Air Act Amendments of 1990, as regarding the servicing of motor vehicle air conditioners (MVACs). It also implements section 608 of the Act regarding certain servicing, maintenance, repair and disposal of air conditioners in MVACs and MVAC-like appliances. The regulation applies to any person performing service on a motor vehicle as it involves the refrigerant in the motor vehicle air conditioner.

40 CFR Part 82, Subpart G

The purpose of this subpart is to implement section 612 of the Clean Air Act Amendments of 1990 regarding the safe alternatives policy on the acceptability of substitutes for ozone-depleting compounds. This program is referred to as the "Significant New Alternatives Policy" (SNAP) program. The objectives of this program are to identify substitutes for ozone-depleting compounds, to evaluate the acceptability of those substitutes, to promote the use of those substitutes believed to present lower overall risks to human health and the environment, relative to the class I and class II compounds being replaced, as well as to other substitutes for the same end-use, and to prohibit the use of those substitutes found, based on the same comparisons, to increase overall risks.

The regulations in this subpart describe persons and substitutes subject to reporting requirements under the SNAP program and explain preparation and submission of notices and petitions on substitutes. The regulations also establish Agency procedures for reviewing and processing EPA's determinations regarding notices and petitions on substitutes. Finally, the regulations prohibit the



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014

use of alternatives which EPA has determined may have adverse effects on human health or the environment where EPA has identified alternatives in particular industrial use sectors that on an overall basis, reduce risk to human health and the environment and are currently or potentially available. EPA will only prohibit substitutes where it has identified other substitutes for a specific application that are acceptable and are currently or potentially available.

6 NYCRR 211.1

This regulation requires that no person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property.

6 NYCRR 212.4 (c)

This rule requires existing sources (in operation after July 1, 1973) of solid particulates with environmental rating of B or C which are not subject to Table 5 "Processes for which Permissible Emission Rate is Based on Process Weight, to be limited to a particulate emission rate not to exceed 0.05 grains per dry standard cubic foot.

6 NYCRR 212.6 (a)

This rule specifies an opacity limitation of less than 20% for any six consecutive minute period for all process emission sources.

6 NYCRR 212.9 (b)

This section refers to Table 2 which specifies the degree of control required for Gases and Liquid Particulate Emissions (Environmental Rating of A, B, C or D) and Solid Particulate Emissions (Environmental Rating A or D) but excluding Volatile Organic Compound Emissions in the New York City Metropolitan Area.

6 NYCRR 229.3 (e) (2) (v)

This section requires the tank to be equipped with conservation vents for storage of volatile organic liquids.

Compliance Certification

Summary of monitoring activities at OCCIDENTAL CHEMICAL CORP - NIAGARA PLANT:

Location Facility/EU/EP/Process/ES	Cond No.	Type of Monitoring

C-00001	41	record keeping/maintenance procedures

New York State Department of Environmental Conservation
Permit Review Report



Permit ID: 9-2911-00112/00233
Renewal Number: 2
03/17/2014

C-00001	42	record keeping/maintenance procedures
FACILITY	28	record keeping/maintenance procedures
FACILITY	29	record keeping/maintenance procedures
J-00001	63	record keeping/maintenance procedures
C-00001	43	record keeping/maintenance procedures
C-00006/C5103/C25/C2505	68	record keeping/maintenance procedures
FACILITY	22	record keeping/maintenance procedures
C-00001	40	record keeping/maintenance procedures
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
FACILITY	7	record keeping/maintenance procedures
FACILITY	67	record keeping/maintenance procedures
B-00001	35	record keeping/maintenance procedures
H-00001/H2401/H01	60	record keeping/maintenance procedures
H-00001/H2402/H02	61	record keeping/maintenance procedures
H-00001/H2403/H02	62	record keeping/maintenance procedures
FACILITY	25	monitoring of process or control device parameters as surrogate
FACILITY	26	record keeping/maintenance procedures
FACILITY	27	intermittent emission testing
B-00002/-/B02	36	record keeping/maintenance procedures
B-00002/-/B03	37	monitoring of process or control device parameters as surrogate
B-00003/-/B05	39	record keeping/maintenance procedures
C-00001/C0612/C01	44	monitoring of process or control device parameters as surrogate
C-00001/C0613/C02	45	monitoring of process or control device parameters as surrogate
C-00001/C3101/C03	46	monitoring of process or control device parameters as surrogate
C-00001/C3102/C04	47	monitoring of process or control device parameters as surrogate
C-00001/C3410/C05	48	monitoring of process or control device parameters as surrogate
C-00006/C5101/C25/C2503	49	intermittent emission testing
C-00006/C5101/C25/C2503	50	monitoring of process or control device parameters as surrogate
C-00006/C5101/C25/C2503	51	monitoring of process or control device parameters as surrogate
C-00006/C5102/C26/C2607	52	intermittent emission testing
C-00006/C5102/C26/C2607	53	monitoring of process or control device parameters as surrogate
C-00006/C5102/C26/C2607	54	monitoring of process or control device parameters as surrogate
E-00001	55	monitoring of process or control device parameters as surrogate
E-00001	56	monitoring of process or control device parameters as surrogate
E-00001	57	monitoring of process or control device parameters as surrogate
E-00001	58	intermittent emission testing
E-00001	59	monitoring of process or control device parameters as surrogate
B-00003/-/B04	38	record keeping/maintenance procedures

Basis for Monitoring

Recordkeeping, monitoring of scrubber concentrations and flow rates and visual opacity readings are the basis for monitoring processes in the chlorine/caustic plant.



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 9-2911-00112/00233

Renewal Number: 2

03/17/2014