NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET
(pursuant to NAC 445A.236)

Permittee Name: Pioneer Americas LLC, d/b/a Olin Chlor Alkali Products
P.O. Box 86
Henderson, Nevada 89009

Permit Number: NEV2000515

Location: Olin Chlor Alkali Products
8000 West Lake Mead Drive
Henderson, Clark County, Nevada
Basic Management Incorporated (BMI) Complex
T22S, R62E, Section 12

Latitude: 36° 02' 44" N.
Longitude: 115° 00' 34" W.

General Description of Facility and Discharge:
The Pioneer Americas LLC, d/b/a Olin Chlor Alkali Products plant is located in Henderson, Nevada on the western part of the Basic Management Incorporated (BMI) complex, which houses several major chemical production companies. Companies in the BMI complex currently consist of Olin, Tronox LLC (formerly Kerr-McGee Chemical Corporation), Titanium Metals Corporation of America (TIMET), ChemStar, and Saguaro Power Company.

The BMI complex was originally the Basic Magnesium facility, which was constructed by the U.S. Government primarily to produce magnesium metal for wartime use in the early 1940s. Stauffer leased and operated the chlorine-caustic soda (chlor-alkali) manufacturing plant from 1946 until 1952. In 1952, Stauffer purchased the plant and 350 surrounding acres. From 1951 to 1984, Stauffer operated the Agricultural Chemicals Division, which manufactured pesticides and organic chemical products at the Henderson site. From 1947 to 1983, Montrose Chemical Company subleased about 20 acres from the Stauffer site to operate an organic chemical plant. In 1988, the ownership of Stauffer Chlor Alkali Company was transferred to Pioneer Chlor Alkali Company, Inc. In 1999, the name of the Company was changed to Pioneer Americas, Inc., and in 2002 to Pioneer Americas LLC (Pioneer). On August 31, 2007, Olin Corporation purchased Pioneer Companies, Inc., and Pioneer Americas LLC, now d/b/a Olin Chlor Alkali Products (Olin), became part of Olin Corporation.

The Olin plant manufactures chlorine gas, caustic soda, hydrochloric acid, and bleach from sodium chloride and water. Products of the facility are shipped via pipeline, rail cars, and trucks. Process areas include the brine makeup area, chlorine area, liquefaction area, caustic plant, acid plant, and steam plant. Process recyclable waters and neutralized wastewaters are discharged to lined evaporation/containment ponds. The following table summarizes the specifications of these ponds and includes a general description of their intended use.

Impoundment	Application	Liner
CAPD 6A Recycling Pond: Surface Area: 39,300 ft² Usable Volume: 2,000,000 gallons	Receives process water overflows from above ground recycle tank and wastewater from the Saguaro Power Company. Also, receives overflows (consists of cooling tower blow down, caustic plant recycle tank overflow, wash water from the muriatic acid plant and rail car wash water) from above ground collection tank, and receives stormwater collected from process areas. This water is then pumped back to the brine plant for reuse in the Plant process.	High Density Poly Ethylene (HDPE) double liners with leak detection/ collection system. Constructed in 2000 with 60-millimeter (mil) HDPE primary and secondary liners.
CAPD 7 Stormwater and Excess Process Fluid Surface area: 1,300,000 ft² Usable Volume: 11,227,000 gallons	Receives non-process area stormwater, neutralized excess process water, emergency spill cleanup fluids.	Originally constructed in 1979, the pond was most recently relined in 2007 with a 60 mil High Density Poly Ethylene (HDPE) primary and 40 mil HDPE secondary liners.
CAPD 9 Brine Mud Storage Surface Area: 304,920 ft² Usable Volume: N/A	Originally used for evaporation of Pioneer process wastewaters and occasional wastewaters from Saguaro Power Company. Currently used to store filtered brine mud in anticipation of closure.	HDPE double liners with leak detection/collection system. Leak detection system no longer in use.
CAPD 5 Brine Mud Storage Surface Area: 78,400 ft² Usable Volume: N/A	Originally used for evaporation of Pioneer process wastewaters. Currently used to store filtered brine mud in anticipation of closure.	Originally constructed in 1976, with 20 mil PVC primary and 10 mil PVC secondary liners, with a leak detection system. Leak detection system no longer in use.

All other past and existing inactive ponds, which include: CAPD 1, CAPD 2, CAPD 3, CAPD 4, CAPD 5, CAPD 6, CAPD 8, ACD 1, and ACD 2 do not receive process fluids, and therefore, monitoring will not be required for these inactive ponds. It is the intent of Olin to close these inactive ponds in accordance with the requirements of Bureau of Corrective Actions (BCA), Nevada Division of Environmental Protection (NDEP).

Receiving Water Characteristics:
The containment and operation of the receiving ponds is considered to be zero-discharge, and will continue to be permitted under the premise that effluent to the ponds will not be discharged to groundwater or surface water of the State. Several existing ground water monitoring wells located upgradient and downgradient of the ponds will be used to ensure that operations of the facility do not degrade groundwater of the State.

Flow: CAPD 6A: The permitted 30-day Average flow of discharge to pond CAPD 6A is 864,000 gallons per day (gpd). CAPD 6A must maintain a minimum of two (2) feet of freeboard.

CAPD 7: The flow of stormwater and excess process fluid discharged to pond CAPD 7 is variable, and will therefore be monitored and reported only. CAPD 7 must maintain a minimum of 2 feet of freeboard.

Proposed Effluent Limitations:
The discharge shall be limited and monitored by the Permittee as specified below for ponds CAPD 6A and CAPD 7. The average quantity of brine mud shall be monitored in CAPD 5 and CAPD 9 and shall be reported quarterly. Compliance monitoring for effluent samples and parameters shall include the following requirements:

Parameters		**Effluent Discharge Limitations 30-Day Average**	**Monitoring Requirements**	
			Measurement Frequency	**Sample Type**
Active Ponds (CAPD6A & CAPD7)	Flow (gallons per day)	CAPD6A: 864,000 CAPD7: M & R	Discrete	Calculate
	pH (Standard Units)	Monitor & Report	Quarterly	Discrete
	Chlorides (mg/l)	Monitor & Report	Quarterly	Discrete
	Sulfates (mg/l)	Monitor & Report	Quarterly	Discrete
	Total Dissolved Solids (mg/l)	Monitor & Report	Quarterly	Discrete
	Profile I Analytes (mg/l)	Monitor & Report	Annually	Discrete
Leak Detected (LD) Sumps (CAPD6A, CAPD7)	Fluid Evacuated (gallons/acre[1]/day)	50	Weekly	Discrete
Brine Mud Storage (tons)	Brine Mud Placed, CAPD5 & CAPD9	Monitor & Report	Quarterly	Calculate

[1] Gallons per acre of pond surface area per day
mg/L: Milligrams per liter
gpd: Gallons per day

Groundwater Monitoring Wells:
The groundwater monitoring program will include both quarterly and annual groundwater sampling, depending on the location and association of the wells with respect to the individual ponds and the intended uses of the ponds. Groundwater monitoring wells B11, B13, B20 and B21, which are laterally configured up- and downgradient of ponds CAPD 6A and CAPD9, will be monitored on a quarterly schedule. All other wells B01, B02, B03, B04, B06, B07, B08, B09, B10, B14R and B16

will be monitored annually to monitor and examine subsurface conditions associated with the inactive ponds.

Samples collected from the select groundwater monitoring wells specified for this permit will be monitored and analyzed for the following parameters:

Parameter	Requirements	Frequency		Sample Type
		Quarterly	Annually	
Depth to Groundwater (feet)	Monitor & Report	B11, B13, B20, B21	B01, B02, B03, B04, B06, B07, B08, B09, B10, B14R, B16	Field Measurement
Groundwater Elevation (feet)	Monitor & Report	B11, B13, B20, B21	B01, B02, B03, B04, B06, B07, B08, B09, B10, B14R, B16	Calculate
pH (Standard units)	Monitor & Report	B11, B13, B20, B21	B01, B02, B03, B04, B06, B07, B08, B09, B10, B14R, B16	Discrete
Chlorides (mg/L)	Monitor & Report	B11, B13, B20, B21	B01, B02, B03, B04, B06, B07, B08, B09, B10, B14R, B16	Discrete
Sulfates (mg/L)	Monitor & Report	B11, B13, B20, B21	B01, B02, B03, B04, B06, B07, B08, B09, B10, B14R, B16	Discrete
Total Dissolved Solids (mg/L)	Monitor & Report	B11, B13, B20, B21	B01, B02, B03, B04, B06, B07, B08, B09, B10, B14R, B16	Discrete
Profile I Analytes (Appropriate Reporting Limits)	Monitor & Report	---	B01, B02, B03, B04, B06, B07, B08, B09, B10, B11, B13, B14R, B16, B20, B21	Discrete

mg/L: Milligrams per liter

Schedule of Compliance and Special Conditions:
The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance.

a. Upon the effective date of this permit, the Permittee shall achieve compliance with the effluent limitations;

b. **By MMM DD, 2009**, the Permittee shall submit an Operations and Maintenance Manual (O&M) to the Division for review and approval. The O&M Manual shall contain both Evaporation Pond Management Plan and Groundwater Monitoring Plan. A site map shall also be included showing the physical locations of all groundwater monitoring wells. The document shall be submitted for review and approval to:

Mr. Nadir Sous
Division of Environmental Protection

Bureau of Water Pollution Control - Las Vegas
2030 E. Flamingo Rd
Suite 230
Las Vegas, NV 89119-0837

There are no other special conditions.

Rationale for Permit Requirements:
Effluent monitoring is required to assess the quantity and quality of the process waste water discharged to the double-lined ponds for disposal by evaporation (zero discharge to groundwater or surface water). Groundwater monitoring is required as a precautionary measure to ensure that operations of the facility do not degrade groundwater of the State.

Proposed Determination:
The Division has made the tentative determination to issue the proposed permit for a period of five (5) years.

Procedures for Public Comment:
The Notice of the Division's intent to issue a permit authorizing the facility to discharge to the double-lined evaporation/containment ponds (zero discharge to groundwater or surface water) subject to the terms and conditions contained within the permit, is being sent to the **Henderson Home News and Las Vegas Review-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing until **March 23, 2009,** which is a period of at least 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238. The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Janine O. Hartley
Bureau of Water Pollution Control
February, 2009