

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION**

**MEETING OF APRIL 11 AND 12, 2001**

Lancaster

**ITEM:** 13

**SUBJECT:** **AMENDED WASTE DISCHARGE REQUIREMENTS - IMC CHEMICALS, INC. AND THE U.S. DEPARTMENT OF INTERIOR, BUREAU OF LAND MANAGEMENT, SEARLES DRY LAKE OPERATIONS - ARGUS PLANT, SAN BERNARDINO COUNTY**

**CHRONOLOGY:** March 8, 1984 Waste Discharge Requirements adopted - Board Order No. 6-84-28 issued to Kerr-McGee Chemical Corporation

August 8, 1991 Revised Waste Discharge Requirements adopted - Board Order No. 6-91-909, North American Chemical Company

June 14, 2000 Revised Waste Discharge Requirements adopted - Board Order No. 6-00-52, IMC Chemicals, Inc.

**ISSUE:** Should the Regional Board amend the Waste Discharge Requirements (WDRs) extending the compliance date for meeting final effluent limits and setting more restrictive interim effluent limits?

**DISCUSSION:** The Discharger withdraws highly mineralized brine from the subsurface of Searles (Dry) Lake. Minerals are extracted from the brine by methods involving washing, dissolution, crystallization, filtration, drying, and precipitation. The products produced at the Argus plant are soda ash and sodium bicarbonate. Effluent (spent brine) is discharged to the Searles Lake system through injection and surface recharge.

Searles Lake is a hydraulically "closed" basin meaning there is no natural outlet for surface or ground water. Surface water was historically ephemeral, but is now present year round due to plant effluent discharges. Organic compounds from the Argus Plant are being released into Searles Lake and have caused accumulation of oil in and on the Lake surface and in Lake sediments, possibly contributing to wildlife mortality.

The existing WDRs include a time schedule to reach final effluent limits of non-detectable concentrations of kerosene hydrocarbons, total recoverable petroleum hydrocarbons, formaldehyde and total phenol in the discharge. The final effluent limits are effective July 1, 2001.

IMCC has implemented best management practices (BMPs) for in-plant discharges and controls to minimize bird contact with the effluent ponds. IMCC has also completed studies of several treatment technologies. Additional time is needed to evaluate potential process changes and further refine analytical methods for the brine discharge.

IMCC requested extension to the April 1, 2001 compliance date to construct facilities and the June 30, 2001 final effluent compliance date, in order to further develop technologies to minimized organic contaminants in the brine discharge.

The proposed Order amends the existing WDRs and reduces the interim effluent limits for the maximum concentration of total petroleum hydrocarbons (TPH) as Kerosene in the discharge to 1.0 mg/l. The total recoverable petroleum hydrocarbon (TRPH) interim effluent limit is reduced to 4.5 mg/l. Additionally, the proposed Order includes new interim effluent limits for total phenols to 1.0 mg/l. These limits reflect effluent concentrations reasonably achievable by treatment technologies that can be put in place now and through implementation of BMPs.

Further reductions in contaminant concentrations may be achieved through in-plant process changes and/or additional effluent treatment. The proposed Order establishes a schedule to submit reports of an evaluation of process changes, further laboratory analytical methods research, and an evaluation of best achievable technologies for meeting non-detectable concentrations in the discharge. The proposed Order requires compliance with current final effluent limits by January 30, 2002.

The existing WDRs describe that the Discharger may submit to the Regional Board information to complete an analysis according to State Water Resources Control Board Resolution 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California) and the non-degradation objective contained in the Water Quality Control Plan for the Lahontan Region. If justified based on the above analysis, the Regional Board may consider changes to the final effluent limits in the proposed Order.

**RECOMMENDATION:** Adoption of the Order as proposed.

Enclosure:

1. Proposed Board Order and Amended Monitoring and Reporting Program
2. IMCC March 3, 2001 letter
3. Board staff March 23, 2001 letter