

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

Searles  
Lake  
RG

CLEANUP AND ABATEMENT ORDER NO. 6-00-64  
WDID NO. 6B368020001, 6B368905004 and 6B368905005

REQUIRING IMC CHEMICALS  
TO CLEAN UP AND ABATE THE EFFECTS OF WASTE DISCHARGES  
TO SEARLES LAKE FROM THE  
IMCC TRONA, ARGUS AND WESTEND FACILITIES

San Bernardino County

The California Regional Water Quality Control Board, Lahontan Region (Regional Board) finds:

1. Discharger

IMC Chemicals (IMCC) operates the Trona, Argus and Westend Plants (Facilities) in Searles Valley, Trona, California. IMCC owns the Trona, Argus and the Westend Plants, the land on which they are located and portions of Searles Lake where the discharge occurs. The Bureau of Land Management (BLM) owns the remainder of Searles Lake where the discharge occurs. For purposes of this Regional Board Order (Order), IMCC and the BLM are referred to collectively as the "Discharger".

2. Facilities and Location

The Facility is an active mineral processing operation located approximately twenty (20) miles east of Ridgecrest, in the Community of Trona in San Bernardino County, T25S, R43E, MDB&M, adjacent to Searles Lake.

Searles Lake covers approximately 70 square miles and contains historical and active dredging and mining operations. These operations include solar ponds, percolation ponds, dredge ponds, a Warm Solution Mining pond (WSM), Lake Garage facilities, salt processing/mining facilities, new and old oil skimmer devices (old serpentine channel, Trona skimmer, temporary skimmers), brine drainage channels, inactive and active equipment yards, unregulated waste debris areas and other industrial facilities. Process waste brines are discharged to areas within the Searles Lake boundary.

3. Apportionment of Primary and Secondary Responsibility

As a landowner of portions of Searles Lake on which IMCC disposal operations occur, BLM is a discharger and is responsible for the discharge and any condition or threatened condition of pollution or nuisance resulting from the discharge as it affects surface or ground waters on BLM managed land. Naming BLM as a Discharger in this Order is consistent with past determinations by Regional Boards and the State Water Resources Control Board (SWRCB) in naming landowners as Dischargers. If IMCC fails to meet the requirements of this Order, or future enforcement Orders, the Regional Board will look to BLM to meet and/or complete the requirements. Before BLM is required to meet and/or complete such requirements, BLM will be informed in writing by the Regional Board Executive Officer, and a new compliance time schedule will be formally established.

Hereinafter, the term "Dischargers" will incorporate the scheme of primary responsibility for IMCC and secondary responsibility for BLM for compliance actions specified in this Order as they affect surface or ground waters on BLM managed lands.

4. Waste Discharge Requirements

Waste Discharge Requirements (WDRs) for the Facilities were established in Board Orders No. 6-00-53 (Trona), 6-00-52 (Argus) and 6-00-54 (Westend) on June 14, 2000.

5. History

IMCC discharges chemical process waste and spent brine to Searles Lake. IMCC utilizes a petroleum hydrocarbon based solvent similar to kerosene in the extraction process. Kerosene is then recycled. However, some of it can escape the unit process and be included in the effluent of the Trona Plant. The Argus Plant effluent also contains non-kerosene type hydrocarbons originating from machine oil drippings. IMCC has used other chemicals such as Monoethanolamine (MEA), formaldehyde and phenols. These compounds are probably non-native and are present in Searles Lake brines. WDRs Board Order Nos. 6-00-53 (Trona) and 6-00-52 (Argus) adopted by the Regional Board, contain a time schedule to achieve effluent limits for the above-mentioned constituents at non-detectable concentrations. Until then, the WDRs for Trona and Argus facilities allow kerosene and non-kerosene total petroleum hydrocarbons (TPH) to be discharged at 10 mg/L each, consistent with previous WDRs. There have been numerous spills of kerosene and non-kerosene hydrocarbon from the facilities to Searles Lake, which is in a hydrologically closed basin. Any discharge of petroleum hydrocarbons and other non-native constituents accumulates in the lake. Specifically, petroleum hydrocarbon constituents have concentrated to a point that a visible oily sheen is periodically present in the Searles Lake waters. At times, oily globules coat the bank of the lake. Observations by both Regional Board staff and California Department of Fish and Game (DFG) staff during site inspections have confirmed numerous dead waterfowl that were encrusted with brine and oil. These conditions indicate that discharges from the IMCC facilities have created a condition of pollution in Searles Lake waters and impaired its beneficial uses.

6. Water Quality Control Plan (Basin Plan)

The Regional Board adopted an amended Water Quality Control Plan for the Lahontan Region (Basin Plan), on March 31, 1995. This Order implements that Basin Plan.

7. Conditions of Pollution

The Discharger has caused a condition of pollution or threatened pollution as defined in Section 13050(d) of the California Water Code (CWC). "Pollution" means an alteration of the quality of the waters of the State by waste to a degree which unreasonably affects either of the following: (a) The waters for beneficial uses or (b) Facilities which serve these beneficial uses and may include "contamination."

During numerous site inspections since February 17, 2000 (total of 13 inspections up to June 23, 2000), Board staff observed visible black floating oil on the discharge channels, dredge pond and percolation ponds of Searles Lake. Board staff collected samples of the floating oil, and analysis revealed the material had 156,000 ppm of TPH. Additionally, Board staff inspected two separate areas (north of Mexican Central Road and south of the Southern Solar Pond) where visible oil/tar was present at the surface of the Searles Lakebed. Board staff has observed numerous dead waterfowl encrusted with brine and oil, which the DFG has collected. The DFG testified during the June 2000 Regional Board meeting that oil was found in the internal organs of the waterfowl. To date, the DFG has collected over 150 dead waterfowl.

The DFG staff also testified that bird mortality due to oil is consistent with other instances where oil was confirmed to be the cause of waterfowl death.

8. Beneficial Uses

The Basin Plan contains the beneficial uses for water at Searles Lake as follows.

Surface Water

The beneficial uses of the surface waters of Searles Lake of the Searles Valley Hydrologic Area of the Trona Hydrologic Unit as set forth and defined in the current Basin Plan are as follows:

- 1) Industrial service supply (IND)
- 2) Contact water recreation (REC-1)
- 3) Non-contact water recreation (REC-2)
- 4) Agricultural supply (AGR)
- 5) Saline water habitat (SAL)
- 6) Wildlife habitat (WILD).

9. Water Quality Objectives

Pursuant to Chapter 3 of the Basin Plan, discharges which cause a violation of the Water Quality Objectives (WQOs) are prohibited. The Basin Plan includes the following narrative WQOs, which apply to surface and/or ground water in the Searles Valley.

- a. Chemical Constituents – *“Waters shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.”*
- b. Floating Material – *“Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water beneficial uses.”*
- c. Oil and Grease – *“Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses.”*
- d. Toxicity – *“All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.”*

10. Basin Plan Violations

The concentrations of petroleum hydrocarbons detected and observed in surface water of Searles Lake exceed WQOs established for the protection of beneficial uses specified in the 1995 Basin Plan. The beneficial uses specifically affected are non-contact water recreation (REC-2), contact water recreation (REC-1), wildlife habitat (WILD), and saline water habitat (SAL). The levels of petroleum hydrocarbons detected in Searles Lake therefore constitute a pollution as defined in Section 13050 of the CWC and a violation of waste discharge prohibitions as established in the Basin Plan.

Based on site inspections, IMCC has violated narrative WQOs (chemical constituents, floating material, oil and grease and toxicity) for the surface waters of Searles Lake and caused a pollution.

11. Violations and Threatened Violations of Board Orders No. 6-00-52 (Argus) and 6-00-53 (Trona)

The Discharger has violated or threatened to violate WQOs for protection of beneficial uses in the Basin Plan, which are also included in Board Order Nos. 6-00-52 (Argus) and 6-00-53 (Trona). WILD is the most sensitive beneficial use of surface water in the vicinity of Searles Lake.

The violations and threatened violations are:

- a. The concentration of non-kerosene TPH constituents in the depleted brine discharge shall not exceed 10 mg/L. The following data are derived from the daily sampling conducted by the Discharger, as requested in the March 8, 2000 letter from the Regional Board.

Plant	TPH			
	TPH Limits (mg/L)	Number of Days over limit (March/April/May 2000)	Maximum Daily Concentration (March/April/May 2000)	Average Monthly Concentration (March/April/May 2000)
Trona	10	7 / 6 / 16	170 / 38 / 52	33 / 5 / 10
Argus	10	3 / 1 / 2	48 / 13 / 16	4 / 2 / 6

- b. The concentration of kerosene in the depleted brine discharge shall not exceed 10 mg/L. The following data are derived from the daily sampling conducted by the Discharger, as requested in the March 8, 2000 letter from the Regional Board.

Plant	Kerosene			
	Kerosene Limits (mg/L)	Number of Days over limit (March/April/May 2000)	Maximum Daily Concentration (March/April/May 2000)	Average Monthly Concentration (March/April/May 2000)
Trona	10	17 / 14 / 18	54 / 33 / 31	15.6 / 11 / 12

12. California Department of Fish and Game Cleanup and Abatement Order

The DFG issued a Cleanup and Abatement Order (CAO) on February 18, 2000. Pursuant to Section 5655 of the California Fish and Game Code, "A regional water quality control board shall incorporate the department's order into the cleanup and abatement order issued pursuant to Section 13304 of the Water Code, unless the department's order is inconsistent with any more stringent requirement established in the cleanup and abatement order. Any action taken in compliance with the department's order is not a violation of any subsequent regional water quality control board cleanup and abatement order issued pursuant to Section 13304 of the Water Code."

13. Discharger Responsibility Under Section 13304 of the California Water Code

The Dischargers, IMCC and BLM are responsible for actions of cleanup and abatement under Section 13304 of the CWC. SWRCB Resolution No. 92-49 (Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304) establishes a process that must be followed for cleanup activities. Clean up should be complete when there is no sheen, floating product or visible soil staining present and sediment and water samples indicate at or below detection levels for kerosene and petroleum hydrocarbons. Interim cleanup is in progress and should continue as necessary to protect waterfowl.

14. Reason for Action

The Discharger has caused or permitted waste to enter waters of the State and has created and threatens to further create a condition of pollution, which affects the water for beneficial uses.

15. Statutory Authority

Section 13304 of the CWC states in part: "*Any person ... who has caused or permitted...or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the State and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the Regional Board clean up such waste or abate the effects thereof or, in case of threatened pollution or nuisance, take other necessary remedial action.*"

16. California Environmental Quality Act

This enforcement action is being taken by this regulatory agency to enforce provisions of the CWC and, as such, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15321, Chapter 3, Title 14, California Code of Regulations.

**THEREFORE, IT IS HEREBY ORDERED**, pursuant to California Water Code Sections 13267 and 13304, and as required in State Board Resolution No. 92-49, the Discharger shall comply with the following.

1. Clean up and abate the effects of petroleum hydrocarbon discharges forthwith and in accordance with the schedule outlined herein.
2. By **July 17, 2000**, submit a technical report describing methods implemented or proposed to significantly reduce the number of waterfowl deaths. Such measures may include, but are not limited to providing additional habitat for wildlife in another portion of Searles Valley, hazing methods, netting to limit waterfowl from landing on surface waters containing floating oil, or other effective measures.
3. By **August 1, 2000**, upon approval of the July 17, 2000 submittal, implement any additional methods identified in Item No. 2 above.
4. By **January 30, 2001**, eliminate all visible petroleum hydrocarbons from surface waters of Searles Lake and remove or remediate to non-detectable levels, all visible petroleum hydrocarbon contaminated surface soils and sediments.

5. By **July 31, 2000**, submit a Work Plan for addressing areal extent of petroleum hydrocarbon contamination of Searles Lake including sediments and surface waters. The Work Plan shall include, but not be limited to the following.
  - a. Criteria for selection of areas to be evaluated,
  - b. Schedule for identification of these areas,
  - c. Work Plan for cleanup,
  - d. Method for sampling and analytical procedures,
  - e. Methods proposed for oil and contaminated soil recovery and disposal,
  - f. Description of feasible cleanup alternatives,
  - g. Estimated cleanup time to restore the lake to background levels, and
  - h. Verification monitoring plan.
6. Justifications for any cleanup level(s) proposed that are greater than background or proposals that do not fully restore beneficial uses must also be included in the Work Plans. Any proposal shall comply with the provisions of:
  - a. Basin Plan (Pages 4.2-4 and 4.2-5)
  - b. State Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California)
  - c. State Board Resolution No. 92-49 III.G.
7. By **August 15, 2000**, upon approval of the July 31, 2000 Work Plan submittal, initiate the work effort identified in Item No. 5 above.
8. **Each Tuesday**, following the effective date of this Order, submit a Cleanup Progress Report to the Regional Board and the Department of Fish and Game. These reports shall cover the prior week (Sunday – Saturday) and include, but not be limited to, the following:
  - a. Volume of oil cleaned up from the surface water,
  - b. Quantity of sediment from the shoreline removed and/or treated,
  - c. Daily evaluation of surface water sheen at set time, with map indicating where observed,
  - d. Number of dead/affected wildlife (by date and map location),
  - e. Location of material sent offsite (include manifests) or treated and disposed onsite,
  - f. Daily log of person-hours, location of cleanup effort, distribution of equipment and cleanup methods used,
  - g. Maps and photos of cleanup activities,
  - h. Progress of cleanup demonstrating continued compliance with this Order, and
  - i. Problems encountered and proposed solutions.
9. Comply with the requirements specified in Attachment 1, which is made a part of this Order, pursuant to California Fish and Game Code Section 5655.

All work plans and technical reports are to be reviewed and signed by a California Licensed Civil Engineer or Registered Geologist. Additionally, all of the field activities are to be conducted under responsible charge of a registered professional. All data shall be prepared in tabulated form, shown on scaled maps as appropriate, and include copies of laboratory results.

Failure to comply with the terms and conditions of this Cleanup and Abatement Order may result in further enforcement action including, but not limited to, assessment of civil liability pursuant to Sections 13323, 13268 and 13350 of the California Water Code, or referral to the Attorney General of the State of California for such legal action as he or she may deem appropriate.

IMC CHEMICALS  
SEARLES LAKE, TRONA  
San Bernardino County

- 7 -

CLEANUP AND ABATEMENT  
ORDER NO. 6-00-64

Ordered by: \_\_\_\_\_  
HAROLD J. SINGER  
EXECUTIVE OFFICER

Dated: July 7, 2000

Attachment 1 – DFG Requirements

2000 Enf disk IMCC-CAO4

## **Attachment 1**

### **Requirements specified in DFG Cleanup and Abatement Order for IMC Chemicals Inc. dated February 18, 2000**

Following are the requirements specified in the above referenced DFG CAO.

1. Follow all directions of the DFG as related to clean up, abatement, and mitigation activities resulting from the discharge.
2. Employ forthwith whatever lawful actions are necessary to clean up and abate the effects of the petroleum product discharge, which is injurious to or poses a threat to wildlife.
3. Prevent any further discharges of petroleum products into State waters which is injurious to or possess a threat to wild life.
4. Utilize personnel that are properly trained and equipped to perform the necessary clean up, abatement, and mitigation activities.
5. Properly dispose of all petroleum and other pollutants recovered during the clean up, abatement, and mitigation activities.



## IMCC Mailing List

James Good  
Gresham, Savage, Nolan & Tilden, LLP  
600 North Arrowhead Avenue, Suite 300  
San Bernardino, CA 92401

Donna Davis  
California Dept of Fish and Game  
P.O. Box 401602  
Hesperia, CA 92340

Kathleen Cox  
U.S. Dept. of the Interior  
Bureau of Land Management  
300 S Richmond Rd  
Ridgecrest, CA 93555

John Key  
U.S. Dept. of the Interior  
Bureau of Land Management  
6221 Box Springs Boulevard  
Riverside, CA 92507

Bill Sellers, District Attorney Investigator  
San Bernardino County  
District Attorney's Office  
10417 Mountain View Ave, 4<sup>th</sup> Floor  
Loma Linda, CA 92354