

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

**ORDER NO. 95-012
WASTE DISCHARGE REQUIREMENTS
FOR
HUGHES MISSILE SYSTEMS COMPANY
(FILE NO. 94-45)**

The California Regional Water Quality Control Board, Los Angeles Region, (Regional Board) finds that:

1. Hughes Missile Systems Company (a corporation, hereinafter called the Discharger) has filed a report of waste discharge with this Board.
2. The Discharger operates a missile research and development facility at 8433 Fallbrook Avenue, Canoga Park, California.
3. In 1985, the Discharger discovered that the soil and groundwater beneath the site were contaminated with volatile organic compounds. The lateral and vertical extent of the soil and groundwater contamination at this property have been defined.
4. The Discharger has submitted an acceptable plan to clean up the contamination in the soil and groundwater.
5. The background total dissolved solids and chloride concentrations in the groundwater at this site are typically as high as 1810 mg/L, and 710 mg/L respectively. Although these concentrations exceed the water quality objectives of 800 mg/L (total dissolved solids) and 100 mg/L (chloride) contained in the Water Quality Control Plan, the Discharger conducted a mass balance study and modeling to demonstrate that the concentrations of total dissolved solids and chloride in the discharge will not cause an adverse impact on the beneficial uses of the underlying groundwater.
6. The Discharger plans to treat up to 22,000 gallons per day (gpd) of groundwater extracted from the first-encountered shallow groundwater beneath the site. Granular activated carbon will be used to remove the contaminants from the water. The treated water will then be pumped to an onsite aboveground storage tank for delivery, as needed, to an existing onsite landscape irrigation system.
7. The Discharger currently uses tap water for landscape irrigation, supplied by Los Angeles Department of Water and Power. Approximately 41,300 gallons per day are used in winter, and 75,200 gallons in summer. It is expected that most of the treated water that is used for irrigation purposes will be taken up by the plants, and little will percolate within the 4 acres of continuous vegetation.

8. The landscape irrigation area overlies the San Fernando Groundwater Basin, of the San Fernando Hydrologic Subarea, in the Los Angeles River Basin.
9. The groundwater in the San Fernando Groundwater Basin is beneficially used for municipal, agricultural, process, and industrial supply.
10. The Board adopted a revised Water Quality Control Plan for the Los Angeles River Basin on June 3, 1991. The Water Quality Control Plan contains beneficial uses and water quality objectives for groundwater in the West San Fernando Groundwater Basin. The requirements contained in this Order, as they are met, will be in conformance with the goals and objectives of the Water Quality Control Plan.
11. This action is being taken for the protection of the environment, and, as such, is exempt from the provisions of the California Environmental Quality Act, (Public Resource Code commencing with Section 21100) in accordance with Section 15308, Chapter 3, Title 14, of the California Code of Regulations.

The Board has notified the discharger and interested agencies and persons of its intent to adopt waste discharge requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

The Board, in a public meeting, heard and considered all comments pertaining to the discharge and the tentative requirements.

IT IS HEREBY ORDERED that Hughes Missile Systems Company (Discharger), in order to meet the provisions contained in the California Water Code, and the California Code of Regulations adopted thereunder, shall comply with the following:

A. Waste Discharge Requirements

1. Wastes discharged shall be limited to treated groundwater only, as proposed.

2. The discharge of an effluent in excess of the following limits is prohibited:

<u>Constituents</u>	<u>Discharge Limitations</u> <u>Maximum</u>
Oil and Grease	15.0 mg/L
Benzene	1.0 µg/L
Toluene	10.0 µg/L
Xylenes (total)	10.0 µg/L
Ethylbenzene	10.0 µg/L
Ethylene dibromide	0.02 µg/L
1,1,1-trichloroethane	10.0 µg/L
1,1,2-trichloroethane	10.0 µg/L
1,1-dichloroethene	6.0 µg/L
1,2-dichloroethane	0.5 µg/L
Methyl ethyl ketone	10.0 µg/L
Methylene chloride	40.0 µg/L
Trichlorofluoromethane	15.0 µg/L
Tetrachloroethene	5.0 µg/L
Trichloroethene	5.0 µg/L
Acetone	1.0 mg/L
Trihalomethanes (total)	100.0 µg/L
Lead (total)	50.0 µg/L
Suspended solids	150 mg/L
Settleable solids	0.3 mg/L
Total dissolved solids	1850 mg/L [1]
Sulfate	300 mg/L
Chloride	725 mg/L [2]
Boron	1.5 mg/L

[1] Exceeds the water quality objective of 700 mg/L in the Basin Plan. However, the results of the fate and transport modeling demonstrated that the concentration of total dissolved solids in the discharge will not cause an adverse impact on the beneficial uses of the groundwater.

[2] Exceeds the water quality objective of 100 mg/L in the Basin Plan. However, the results of fate and transport modeling demonstrated that the concentration of chlorides in the discharge will not cause an adverse impact on the beneficial uses of the groundwater.

3. The pH of the treated water shall at all times be within the range of 6.5 to 8.5 pH units.
4. Treated groundwater use or disposal shall not impart tastes, odors, color, foaming, or other objectionable characteristics to receiving surface or/and groundwater.
5. Treated groundwater use or disposal, which could affect receiving groundwater, shall not contain any substance in concentrations toxic to human, animal, or plant life.
6. The disposal of any radioactive materials is prohibited.
7. This discharge shall not cause a violation of any applicable water quality standard for groundwaters adopted by the Regional Board or the State Water Resources Control Board.
8. Wastes shall be discharged only at the site covered by these requirements, and only on property owned or controlled by the Discharger.
9. The discharge of any wastes to the ground surface, into any watercourse, drainage ditch, or tributary to surface waters, without a National Pollutant Discharge Elimination System (NPDES) Permit, is prohibited at all times.
10. Treated groundwater used for irrigation shall be retained on the areas of use and shall not be allowed to escape as surface flow, except as provided for in a NPDES permit.
11. Treated groundwater shall be applied at such a rate and volume as not to exceed vegetative demand and soil moisture conditions. Special precautions must be taken to prevent clogging of spray nozzles, to prevent overwatering, and to exclude the production of runoff. Pipelines shall be maintained so as to prevent leakage.
12. Treated groundwater shall not be used for irrigation during periods of extreme rainfall and/or runoff.
13. Treated groundwater use or disposal shall not result in earth movement in geologically unstable areas.

14. Adequate facilities shall be provided to protect the groundwater treatment facilities from damage by storm flows and runoff.
15. Neither treatment of waste nor any treated groundwater use or disposal shall cause pollution or nuisance.
16. Groundwater treatment and reuse or disposal shall not result in problems due to breeding of mosquitoes, gnats, midges, or other pests.
17. Any waste removed from the site for disposal shall be disposed only at a legal disposal site. For the purpose of these requirements, a legal disposal site is one for which requirements have been adopted by a Regional Water Quality Control Board, and which is in full compliance therewith.

B. Provisions

1. This Order includes "Standard Provisions Applicable to Waste Discharge Requirements". If there is any conflict between provisions stated herein and the "Standard Provisions Applicable to Waste Discharge Requirements", these provisions stated herein will prevail.
2. Before the commencement of groundwater treatment and discharge from the treatment system, the Discharger shall collect effluent samples during a "trial run" of the treatment system. The effluent samples shall be analyzed in a certified laboratory for the parameters listed in the Monitoring and Reporting Program to confirm that the treated groundwater meets the discharge limitations specified in this Order.
3. If, at any time, the water discharged exceeds the effluent limitations contained in this Order, the Discharger shall notify Regional Board staff by telephone within 24 hours. Written confirmation shall be submitted within one week of the telephone notification. Alternative disposal, storage, or additional treatment to meet the discharge limitations will then be required.

C. Expiration date

1. This Order expires on January 10, 2000.
2. The Discharger must file a report of waste discharge in accordance with Title 23, California Code of Regulations, no later than 180 days in advance of the expiration date, as application for new waste discharge requirements.

I, Robert P. Ghirelli, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on January 23, 1995.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

/OM.

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
MONITORING AND REPORTING PROGRAM NO: 7483

FOR

HUGHES MISSILE SYSTEMS COMPANY
8433 FALLBROOK AVENUE, CANOGA PARK
(FILE NO. 94-45)

Hughes Missile Systems Company (Discharger) shall implement this monitoring program on the effective date of this Order.

REPORTING

1. Monitoring reports shall be submitted to the Regional Board according to the following schedule:

<u>Reporting Period</u>	<u>Report Due Date</u>
July-September	October 15th
October-December	January 15th
January-March	April 15th
April-June	July 15th

2. The first report (for January-March 1995) is due by April 15, 1995.
3. Each quarterly report shall contain, at a minimum, the following information:
 - a. A discussion of all corrective action activities, ongoing and completed, during the reporting period,
 - b. A discussion of corrective action activities proposed for the next reporting period, including the installation and/or abandonment of any groundwater monitoring wells,
 - c. The total volume of water, in gallons per day, pumped from the groundwater extraction system and treated during the reporting period (if no wastes were discharged during any reporting period, the report shall so state),
 - d. Estimated time schedule for the completion of the cleanup activities,
 - e. The results of soil and groundwater sampling and testing completed during the reporting period, together with an evaluation of the monitoring data,

- f. The EPA test method used for each analysis,
 - g. Monthly groundwater elevation measurements for all monitoring wells,
 - h. Updated groundwater contour maps generated from the groundwater elevation data, together with a map showing constituent concentrations across the site, including the offsite edge of the contaminant plume.
4. Each monitoring report shall include a statement that all treated wastewater was used as specified in the requirements during the reporting period.
 5. The Discharger shall maintain all sampling and analytical results, including strip charts, data, exact location and time of sampling, date analyses were performed, analyst's name, analytical procedures used, and the results of the analyses. Such records shall be maintained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board.
 6. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed, together with a timetable, to bring the discharge back into full compliance with the requirements at the earliest time.
 7. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services Environmental Laboratory Accreditation Program, or approved by the Executive Officer. Laboratory analyses must follow methods approved by the United States Environmental Protection Agency (EPA), and the laboratory must meet EPA Quality Assurance/Quality Control criteria. All analytical data must be presented on the enclosed Laboratory Report Forms.
 8. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the data, the constituents, and the concentrations are readily discernible. The data shall be summarized to determine compliance with waste discharge requirements and, where applicable, shall include receiving groundwater observations.

ANNUAL REPORT

Annual summary reports shall be submitted by March first of each year. The first annual summary report (due March 1, 1996), shall include the results of all analyses and a complete system evaluation. This evaluation shall include an analysis of the groundwater monitoring, and the effectiveness of the soil and groundwater treatment and recharge system. The analysis shall include, but not be limited to, the present soil and groundwater conditions (including the analytical data from the soil and groundwater monitoring program), rate of cleanup, system operating conditions, project completion schedule (if possible) and any modifications made during the life of the system.

In the event the groundwater extraction or cleanup system is not effectively cleaning or controlling the contaminant plume, a new remedial action plan and revised waste discharge requirements shall be required for further groundwater cleanup.

EFFLUENT MONITORING

1. A sampling station shall be established for each point of discharge and shall be located where representative samples of the effluent can be obtained. In the event that waste streams from sources are combined for treatment of discharge, representative sampling stations shall be at that place to ensure that the quantity of each waste source regulated by effluent limitations can be determined.
2. The detection limits employed for effluent analyses shall be lower than limits contained in this Order for a given parameter, unless the Discharger can demonstrate that a particular detection limit is not attainable, and obtains approval for a higher detection limit from the Executive Officer. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory quality assurance/quality control procedures.
3. This Regional Board shall be notified in writing of any change in the sampling stations once established, or in the methods for determining the quantities of pollutants in the individual waste streams.

<u>Constituent</u>	<u>Units</u>	<u>EPA Method Number</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Effluent flow	gal/day	----	----	weekly
Temperature	° F	----	grab	weekly
pH	pH units	----	grab	weekly
Oil and grease	mg/L	413.2	grab	weekly ^[2]
Benzene	µg/L	8260	grab	weekly ^[2]
Toluene	µg/L	8260	grab	weekly ^[2]
Xylenes (total)	µg/L	8260	grab	weekly ^[2]
Ethylbenzene	µg/L	8260	grab	weekly ^[2]
Ethylene dibromide	µg/L	504	grab	weekly ^[2]
1,1,1-trichloroethane	µg/L	8260	grab	weekly ^[2]
1,1,2-trichloroethane	µg/L	8260	grab	weekly ^[2]
1,1-dichloroethane	µg/L	8260	grab	weekly ^[2]
1,1-dichloroethene	µg/L	8260	grab	weekly ^[2]
1,2-dichloroethane	µg/L	8260	grab	weekly ^[2]
Methyl ethyl ketone	µg/L	8260	grab	weekly ^[2]
Methylene chloride	µg/L	8260	grab	weekly ^[2]
Trichlorofluoromethane	µg/L	8260	grab	weekly ^[2]
Tetrachloroethene	ug/L	8260	grab	weekly ^[2]
Trichloroethene	µg/L	8260	grab	weekly ^[2]
Acetone	mg/L	8260	grab	weekly ^[2]
Trihalomethanes (total)	µg/L	8260	grab	weekly ^[2]
Lead (total)	µg/L	7421 ^[1]	grab	quarterly
Total petroleum hydrocarbons ^[3]	mg/L	8015	grab	quarterly
Suspended solids	mg/L	----	grab	quarterly
Settleable solids	mg/L	----	grab	quarterly
Total dissolved solids	mg/L	----	grab	quarterly
Sulfate	mg/L	----	grab	quarterly
Chloride	mg/L	----	grab	quarterly
Boron	mg/L	----	grab	quarterly

[1] Graphite furnace method.

[2] If test results of these constituents consistently show full compliance with the effluent limitations for at least three months, the frequency of testing may be reduced to monthly, unless otherwise specified by the Executive Officer. However, if any of these constituents exceeds the effluent limitations, the frequency of analysis shall be increased to weekly. After four consecutive samples show full compliance with the discharge limitations, the frequency of analysis may revert to monthly.

[3] As gasoline. T-4

GROUNDWATER MONITORING

1. A water sample shall be collected from each groundwater monitoring well (after the well has been properly purged) on a quarterly basis. The samples shall be analyzed for volatile organic compounds by EPA method 8260.
2. The depth to groundwater in each of the monitoring wells shall be determined to an accuracy of 0.01 feet on a monthly basis. The groundwater elevation (in feet above mean sea level) shall be computed by subtracting the measured depth from the elevation of the well top reference point. These data shall be included in the report.

HAULING REPORT

In the event that wastes are transported to a different disposal site during the reporting period, the following information shall be included in the monitoring report for that period:

1. Types of wastes and quantity of each type,
2. Name and address of each hauler of wastes (or method of transport if other than hauling),
3. Location of the final disposal point(s) for each type of waste,
4. If no wastes were hauled, the report shall so state.

OPERATION AND MAINTENANCE REPORT

The Discharger shall file a technical report with the Board, not later than 30 days after receipt of this Order, relative to the operation and maintenance program for the groundwater treatment and spray irrigation system. The report shall contain, at a minimum, the following information:

1. The name and address of the person or company responsible for the operation and maintenance of the groundwater treatment system,
2. Type of maintenance (preventive or corrective),
3. Frequency of maintenance, if preventive.

GENERAL PROVISIONS FOR REPORTING

All technical reports submitted to the Board, which include engineering or geological evaluations or judgments, shall be signed by a California registered civil engineer, a registered geologist, or certified engineering geologist, in addition to the certification required in Standard Provision Number 19.

The monitoring reports required by this program shall be submitted to:

California Regional Water Quality Control Board
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, CA 91754-2156
ATTN: Technical Support Unit

These records and reports are public documents and shall be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

Ordered by: Robert P. Ghirelli
ROBERT P. GHIRELLI, D.Env.
Executive Officer

Date: January 23, 1995

VOM.