



Dr. Alan Lloyd
Agency Secretary

California Regional Water Quality Control Board

Los Angeles Region

Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful



Arnold Schwarzenegger
Governor

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July 8, 2005

Mr. Steve Granade, Environmental Engineer
Naval Base Ventura County
Environmental Division, Code N45V
311 Main Road, Suite #1
Point Mugu, CA 93042-5000

GENERAL WASTE DISCHARGE REQUIREMENTS

(ORDER NO. R4-2005-0030, SERIES NO. 020, CI NO. 8906)

MAGNESIUM SULFATE AND SODIUM SULFATE INJECTION TO ENHANCE NATURAL ATTENUATION OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER – BUILDING 631, GOVERNMENT MOTOR FUEL STATION, 631 12TH STREET, NAVAL BASE VENTURA COUNTY, POINT MUGU, CALIFORNIA (SLIC NO. 282, FILE NO. 98-017)

Dear Mr. Granade:

Los Angeles Regional Water Quality Control Board (Regional Board) staff have completed our review of your application for coverage under General Waste Discharge Requirements (WDR) to inject solutions of site groundwater mixed with magnesium sulfate and sodium sulfate into the shallow “semi-perched” aquifer underlying the site to enhance naturally occurring bioremediation of petroleum fuel hydrocarbons. We have determined that the proposed discharge meets the conditions specified in Regional Board Order No. R4-2005-0030, “*General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites*,” adopted by this Regional Board on April 19, 2005. Refer to the attached Fact Sheet.

The primary contaminants in groundwater at the site are benzene, toluene, ethylbenzene, xylenes, (BTEX), methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), and di-isopropyl ether (DIPE). The Navy proposes to inject magnesium and sodium sulfate-based solutions to promote naturally occurring sulfate reduction and enhance bioremediation. Several case histories were provided to the Regional Board documenting the successful application of this remedial technology at sites contaminated with petroleum hydrocarbons.

You may begin to inject a maximum of 8,000 gallons of an aqueous solution containing approximately 755 pounds of sodium sulfate and magnesium sulfate into the shallow “semi-perched aquifer, at an initial concentration of approximately 11,000 milligrams per liter, via four injection wells and several horizontal injection lines placed in the tank excavation prior to backfilling. The injection will occur into the dissolved hydrocarbon plume, at Naval Base Ventura County, Point Mugu Naval Air Station, Building 631 at approximately Latitude: N34.11°, Longitude: W-119.10°.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2005-0030 (Series 020) and Monitoring and Reporting Program No. CI-8906. Please note that the discharge

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limits in Attachment A [DWR Basin No. 4-4 (Oxnard Plain – Unconfined and Perched Aquifers)] of this Order No. R4-2005-0030 are applicable to your discharge.

The “Monitoring and Reporting Program” requires you to implement the monitoring program on the effective date of this enrollment (June 29, 2005) under Regional Board Order No. R4-2005-0030. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to “Compliance File No. CI-8906”, which will assure that the reports are directed to the appropriate file and staff. Also, please do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

If you have any questions, please contact Mr. Peter Raftery at (213) 576-6724.

Sincerely,

Jonathan Bishop
Executive Officer

Enclosures:

- 1) Fact Sheet
- 2) General Waste Discharge Requirements, Order No. R4-2005-0030
- 3) Monitoring and Reporting Program, CI No. 8906

cc: Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
U.S. Army Corps of Engineers
NOAA, National Marine Fisheries Service
Department of Interior, U.S. Fish and Wildlife Service
Peter Chen, Department of Toxic Substances Control, Cypress
Christine Bucklin, Department of Toxic Substances Control, Glendale
Michael Lauffer, State Water Resources Control Board, Office of Chief Counsel
Tariq Hussein, URS, Santa Ana
Department of Fish and Game, Region 5
John Youngerman, State Water Resources Control Board, Division of Water Quality
Kurt Souza, State Department of Health Services, Drinking Water Field Operations Branch,
Carpinteria
Jessie Altstatt, Santa Barbara Channel Keeper

Carbon copy list continues on next page

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Barbara Carey, California Coastal Commission, South Central Coast Office Vicki Clark,
Environmental Defense Center
Allison Detmer, California Coastal Commission, Energy and Ocean Resources Division
Mary Meyer, California Department of Fish & Game
Heal the Bay
Port Hueneme Water Agency
Doug Beach, Ventura County Environmental Health
Glen Luscomb, Ventura County Public Works
Ernest Lorie, US Navy, Port Hueneme

