

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. R9-2002-0340

SHELL OIL PRODUCTS US
SHELL (FORMERLY TEXACO) SERVICE STATION
44260 REDHAWK PARKWAY
TEMECULA, CA

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. **Unauthorized Discharge of Waste:** In 2001, an unauthorized discharge of petroleum hydrocarbon waste to soil and groundwater was detected at the Shell (formerly Texaco) Service Station in Temecula, Riverside County, California. The waste was discharged from the station's underground storage tank system and resulted in a condition of pollution in the underlying groundwater aquifer.
2. **Party Responsible for the Discharge:** Equilon Enterprises LLC dba Shell Oil Products US (hereinafter discharger) is the party responsible for the discharge. The discharger owned and operated the retail gasoline station at 44260 Redhawk Parkway in Temecula at the time of the discharge. As the owner and operator of the underground storage tank (UST) system, the discharger caused the discharge of petroleum hydrocarbon waste to soil and groundwater at the station.
3. **Condition of Pollution:** The property at which the waste was discharged is located in the Murrieta hydrologic subarea of the Santa Margarita Hydrologic Unit. This subarea has designated beneficial uses for both surface waters and groundwaters, including municipal and domestic supply. The property lies above an aquifer that is used as a drinking water source. Two public supply wells are within 400 feet of the discharge, and a third public supply wells is within 1,000 feet of the discharge.

Gasoline constituents including benzene, toluene, ethylbenzene, xylene, methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), tertiary amyl methyl ether (TAME), and ethyl tertiary butyl ether (ETBE) have been discharged to the groundwater beneath the site in concentrations that exceed naturally occurring background concentrations and applicable water quality objectives. The concentrations of contaminants also exceed the maximum contaminant levels (MCL) allowable in drinking water set by the California State Department of Health Services (DHS). The concentrations of petroleum

hydrocarbons and petroleum hydrocarbon constituents have degraded the quality of groundwater and impaired the designated beneficial uses of the waters as defined in the Water Quality Control Plan for the San Diego Basin creating a condition of pollution.

4. **CEQA:** This action is an order to enforce the laws and regulations administered by the Regional Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15308 of the Resources Agency Guidelines.

IT IS HEREBY ORDERED, pursuant to sections 13267 and 13304 of the California Water Code, that the discharger shall cleanup and abate the effects of the discharge described in the above findings as follows:

A. TASKS

1. **Interim Remedial Actions:** The discharger shall implement interim remedial actions to abate or correct the actual or potential effects of the unauthorized release pursuant to section 2722(b) of the regulations governing underground storage tanks (California Code of Regulations (CCR) Title 23, Chapter 16). Interim remedial actions may include but are not limited to activities that remove all free product, removal of petroleum hydrocarbon sources (e.g. soil saturated with petroleum hydrocarbons) and/or mitigation of contamination of all surface and groundwater affected by the waste discharge. Within thirty (30) days of the date of this order, the discharger shall notify the Regional Board in writing with a proposed workplan and schedule for the interim remedial actions.
2. **Groundwater Monitoring:** The discharger shall implement a quarterly groundwater monitoring program, as specified in Enclosure 1, at the site commencing with the quarterly report due on **January 30, 2003**.
3. **Site Conceptual Model:** The discharger shall submit a Site Conceptual Model (SCM). The SCM is a written or pictorial representation of the release scenario, the likely distribution of wastes at the site, as well as potential pathways and receptors. The SCM shall identify and describe the types of wastes present including their distribution in space and time, and how the wastes are changing in space and time.

The SCM shall also identify the potential, current and future receptors in the area; link potential sources to potential receptors through transport of wastes in the air, soil and water; and identify the fate and transport characteristics of the site. It should describe or show the physical characteristics and properties of the subsurface and identify the environmental issues that need to be investigated (as well as those issues that do not

need to be addressed). The initial SCM shall include a discussion of the level of uncertainty of conclusions, outline data gaps remaining in the conceptual model, and describe the additional work needed to fill identified data gaps.

The SCM shall be refined and updated as site characterization data become available. Updates to the SCM shall be included in the all future technical and quarterly monitoring reports submitted. The first SCM is due no later than **November 30, 2002**.

4. **Soil And Groundwater Investigation:** Conduct an investigation to identify all wastes from the discharge and the horizontal and vertical extent of the wastes both on and off site to background water quality conditions in both the groundwater and soil. Characterize the geology and hydrogeology of the site with respect to transport of the waste. Determine the source, and nature of the discharge in the subsurface, and evaluate the impacts of the wastes on all existing and future sensitive receptors that could be affected by the waste. Submit an adequate workplan and schedule for the next phase of this investigation. The workplan shall propose tasks needed to obtain data to fill the data gaps identified in the SCM. An adequate workplan is due no later than **November 30, 2002**. Implementation of the workplan shall commence no later than 60 days after submission of an adequate workplan.

Within 60 days of the conclusion of the investigation a technical report shall be submitted that adequately characterizes the source, nature and extent (both laterally and vertically) of the discharge and addresses any pollution that has migrated off-site. The information in the report must provide an adequate basis for determining subsequent cleanup and abatement actions.

5. **Corrective Action Plan:** The discharger shall prepare a Corrective Action Plan (CAP) in conformance with the provisions of section 2725 of CCR Title 23, Chapter 16. The CAP shall describe a range of remedial action alternatives to complete the site cleanup and include a schedule for implementation of the preferred remediation alternative. The CAP shall consider mitigation of the following constituents in the affected groundwater zones: benzene, toluene, total xylenes, ethylbenzene, MTBE, TBA and any other waste which may have been released by the discharger. All free phase petroleum hydrocarbon product must be removed (to the extent practicable) and any sources of petroleum hydrocarbon wastes must be removed. Implementation of the CAP shall commence no later than 60 days after submission of the CAP to the Regional Board. Within 60 days of completion of the CAP a technical report shall be submitted to the Regional Board with the results verifying implementation of the CAP and evaluating overall remedial effectiveness. The discharger shall monitor, evaluate, and report the results of implementation of the CAP in the quarterly monitoring reports.

6. **Verification Monitoring:** Upon completion of corrective action, the discharger shall conduct verification monitoring in conformance with the provisions of section 2727 of CCR Title 23, Chapter 16. The discharger shall submit a workplan to implement a verification monitoring program that includes a schedule for submitting monitoring reports. The workplan shall be submitted within 60 days of completion of the CAP. When implemented, the verification monitoring program shall replace the quarterly ground-water monitoring program (directive 2). The discharger shall implement the verification monitoring program within 30 days of submitting the workplan to the Regional Board. Periodic monitoring reports shall be submitted according to the schedule in the workplan.

7. **Groundwater Cleanup Levels:** The discharger shall cleanup and abate the effects of the discharge in a manner that promotes the attainment of either background water quality or the best water quality which is reasonably attainable if background levels of water quality cannot be restored, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible. Any alternative cleanup levels less stringent than background water quality are subject to Regional Board approval and shall:
 - a. Be derived by applying section 2725 of CCR Title 23, Chapter 16 and the conditions set forth in section 2550.4 of Chapter 15 (CCR Title 23);
 - b. Be consistent with maximum benefit to the people of the State;
 - c. Not unreasonably affect present and anticipated beneficial use of such water; and
 - d. Not result in water quality less than that prescribed in the Basin Plan and Policies adopted by the State and Regional Boards.

8. **Soil Cleanup Levels:** Residual concentrations of fuel constituents in soils must meet all the following criteria: 1) be low enough so that leachable contaminants will not cause the groundwater cleanup levels to be exceeded at/near the site; and 2) be protective of human health and the environment. The discharger shall propose to the Regional Board a range of site-specific soil cleanup levels based upon a technical evaluation of risks from residual soil contaminants and analytical results from contaminant leachability tests performed on an adequate number of significantly contaminated soils samples collected from the site. Soil cleanup levels proposed by the discharger are subject to Regional Board review and approval.

B. PROVISIONS

1. **No Pollution, Contamination or Nuisance:** The storage, handling, treatment, or disposal of soil containing petroleum hydrocarbon waste or polluted groundwater shall not create conditions of pollution, contamination or nuisance as defined in California

Water Code section 13050(m). The dischargers shall properly manage, treat and dispose of soils containing petroleum hydrocarbon waste and polluted groundwater in accordance with applicable federal, State and local regulations.

2. **Good Operation and Maintenance:** The discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Groundwater Monitoring Program:** The discharger shall comply with the Groundwater Monitoring Program enclosed with this Order.
4. **Contractor/Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California Registered Geologist, or a California Registered Civil Engineer.
5. **Lab Qualifications:** All samples shall be analyzed by California State-certified laboratories using approved U.S. Environmental Protection Agency methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Regional Board review.
6. **Reporting of Changed Owner or Operator:** The discharger shall notify the Regional Board in writing of any change in owner or operator, or name change of the owner or operator of the UST system within 30 days of the change. The notification shall include the date of the change and the name of the new owner/operator of the UST system.
7. **Cost Recovery:** The discharger shall reimburse the State for all reasonable costs actually incurred by the Regional Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order, according to billing statements prepared from time to time by the State Water Resources Control Board. If the discharger is enrolled in a reimbursement program managed by the State Water Resources Control Board for the discharge addressed by this Order, reimbursement shall be made pursuant to the procedures established in that program. Any disputes raised by the discharger over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.
8. All corrective actions shall be in accordance with the provisions of CCR Title 23, Chapter 16 and State Water Resource Control Board Resolution No. 92-49, Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304.

November 8, 2002

9. The discharge of waste, except as specifically authorized by Waste Discharge Requirements adopted by the State Water Resource Control Board and/or the Regional Water Quality Control Board, is prohibited.

November 8, 2002

JOHN H. ROBERTUS
Executive Officer
California Regional Water Quality Control Board
San Diego Region

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FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY
SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO:
IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE
SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR
INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY
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Enclosure: Quarterly Groundwater Monitoring Program

ENCLOSURE 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

QUARTERLY GROUNDWATER MONITORING PROGRAM

SHELL OIL PRODUCTS US
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44260 REDHAWK PARKWAY
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1. **AUTHORITY AND PURPOSE:** The discharger is directed to submit the monitoring reports required in this Groundwater Monitoring Program (GMP) pursuant to California Water Code sections 13267 and 13304. This GMP is intended to document compliance with Cleanup and Abatement Order No. R9-2002-0340.
2. **MONITORING:** The discharger shall measure groundwater elevations quarterly in all monitoring wells, and shall collect and analyze samples of groundwater from all monitoring wells using U.S. Environmental Protection Agency (EPA) analytical method 8015 for quantifying total petroleum hydrocarbons as gasoline and diesel, or an equivalent method approved by the Regional Board, and EPA method 8260b for volatile organic compounds including benzene, toluene, ethylbenzene, xylenes, methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA) and all other fuel oxygenates.

The discharger shall sample any new monitoring or extraction wells quarterly and analyze groundwater samples for the same constituents as shown above. The discharger may propose changes in the above sampling requirements; any proposed changes are subject to Regional Board approval.

3. **QUARTERLY GROUNDWATER MONITORING REPORTS:** The discharger shall submit quarterly groundwater monitoring reports to the Regional Board no later than 30 days following the end of the quarter according to the following schedule:

First Quarter (Jan-Mar)	Due no later than April 30
Second Quarter (Apr-Jun)	Due no later than July 30
Third Quarter (Jul-Sep)	Due no later than October 30
Fourth Quarter (Oct-Dec)	Due no later than January 30

This schedule shall commence with the submission of a quarterly monitoring report due on **January 30, 2003**.

The quarterly monitoring reports shall include:

- A. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
- B. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, with depth to groundwater, top of casing elevations, depths to the top of well screens, length of well screens and total depth for each well included in the monitoring program. For all wells containing floating free petroleum product (light non-aqueous phase liquids or LNAPL) include the measured thickness of LNAPL in a tabular form. A groundwater elevation map should be prepared for each monitored water-bearing zone with the groundwater flow direction and calculated hydrologic gradients(s) clearly indicated in the figures(s). Historical groundwater elevations shall be included in the fourth quarterly report each year.
- C. **Reporting Groundwater Results:**
 1. Groundwater sampling data shall be presented in tabular form, and an isoconcentration map shall be prepared for constituents of concern for each monitored water-bearing zone, as appropriate. Time versus concentration plots and distance versus concentration plots that include groundwater elevation shall be prepared for constituents of concern for appropriate wells.
 2. Provide a site plot plan which clearly illustrates the locations of monitoring wells, former/current underground storage tank systems (and product piping) and buildings located on site and immediately adjacent to the property lines of the site.
 3. Provide a site plot plan with the most recent concentrations of total petroleum hydrocarbons and volatile aromatic hydrocarbons (e.g. benzene, toluene, ethylbenzene, total xylenes, MTBE, TBA and other fuel oxygenates).
 4. The report shall provide technical interpretations of the groundwater data, and describe any significant increases in contaminant concentrations since the last report, any measures proposed to address the increases, any changes to the Site Conceptual Model, and conclusions and recommendations for future action with each report.

5. The report shall describe analytical methods used, detection limits obtained for each reported constituent, and a summary of QA/QC data (including laboratory flags/comments).
6. The report shall indicate sample collection protocol, describe how investigation derived wastes are managed at the site, and include documentation of proper disposal of contaminated well purge water and/or soil cuttings removed from the site.
7. Historical groundwater sampling results shall be provided in tabular form and included in the fourth quarterly report each year.
8. Sampling data and groundwater elevation data shall be submitted via the internet to the GeoTracker data warehouse in the appropriate electronic deliverable format according to the schedule in item 3 above. The GeoTracker website address is <http://geotracker.swrcb.ca.gov>.

D. **Status Report:** The quarterly report shall describe relevant work completed during the reporting period (e.g. site investigation, interim remedial measures, results of implementation of the Corrective Action Plan) and work planned for the following quarter.

4. **VIOLATION REPORTS:** If the discharger violates requirements in the Cleanup and Abatement Order, then the discharger shall notify the Regional Board office by telephone as soon as practicable once the discharger has knowledge of the violation. Regional Board staff may, depending on violation severity, require the discharger to submit a separate technical report on the violation within five (5) working days of telephone notification.
5. **OTHER REPORTS:** The discharger shall notify the Regional Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.
6. **RECORD KEEPING:** The discharger or his/her agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six (6) years after origination and shall make them available to the Regional Board upon request.
7. **GROUNDWATER MONITORING PROGRAM REVISIONS:** Revisions to the GMP may be ordered by the Regional Board, or requested by discharger. Prior to making GMP revisions, the Regional Board will consider the burden, including costs, of the groundwater monitoring reports relative to the benefits to be obtained from these reports.

Cleanup and Abatement
Order No. R9-2002-0340

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JOHN H. ROBERTUS
Executive Officer
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