



# California Regional Water Quality Control Board

## San Diego Region



Gray Davis  
Governor

Winston H. Hickox  
Secretary for  
Environmental  
Protection

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February 14, 2002

CERTIFIED – RETURN RECEIPT REQUESTED  
7099 3400 0017 1547 2526

Atlantic Richfield Company  
Mr. Gordon Terhune  
4 Centerpointe Drive  
LPR4-171  
La Palma, CA 90623

In Reply Refer To:  
UST:50-1031:jme

Dear Mr. Terhune:

**RE: ISSUANCE OF CLEANUP AND ABATEMENT ORDER NO. R9-2002-0024  
FOR THE DISCHARGE OF PETROLEUM HYDROCARBONS TO SOILS  
AND GROUNDWATER AT THE ARCO SERVICE STATION #3012,  
27641 YNEZ ROAD, TEMECULA, CALIFORNIA**

Enclosed is copy of Cleanup and Abatement Order (CAO) No. R9-2002-0024 for the cleanup of an unauthorized release of petroleum hydrocarbons at ARCO Service Station #3012. This CAO is issued by the California Regional Water Quality Control Board (Regional Board) to the Atlantic Richfield Company (hereinafter ARCO) under authority of California Water Code (CWC) section 13304.

The enclosed CAO directs ARCO to cleanup the soil and groundwater contamination in compliance with all relevant state regulations, policies and procedures of the State Water Resources Control Board. The CAO directs ARCO to provide to the Regional Board quarterly groundwater monitoring reports, written site conceptual model, site investigation reports, and a corrective action plan.

Please take note of the deadlines set in the CAO. Violation of a CAO directive may result in an administrative civil liability (ACL) in a minimum amount of five hundred dollars (\$500) up to a maximum of five thousand dollars (\$5,000) for each day of violation.

### ***California Environmental Protection Agency***

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>.*

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February 14, 2002

My staff will be happy to work with you in your efforts toward achieving compliance with the directives of the enclosed CAO. If you have any questions please contact Ms. Jody Ebsen of my staff at (858) 636-3146.

Respectfully,



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

cc: Mr. G. Cleve Solomon, Secor International Incorporated, 5882 Bolsa Avenue, Suite 200,  
Huntington Beach, CA 92649

Ms. Sandy Bunchek, Riverside Department of Environmental Health, P.O. Box 7600,  
Riverside, CA 92503

JHR:jac:jme

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. R9-2002-0024

ARCO SERVICE STATION #3012  
27641 YNEZ ROAD  
TEMECULA, CA

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

1. **Unauthorized Discharge of Waste:** In 1989, an unauthorized discharge of petroleum hydrocarbon waste to soil and groundwater occurred at the ARCO Service Station #3012 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:** Atlantic Richfield Company (ARCO), a wholly owned subsidiary of BP p.l.c., (hereinafter discharger) is the party responsible for the discharge. The discharger owns and operates the retail gasoline station at 27641 Ynez Road in Temecula. As the owner and operator of the underground storage tank system, the discharger caused the initial discharge of petroleum hydrocarbon waste to soil and groundwater at the station.
3. **Condition of Pollution:** The property at which the petroleum hydrocarbon waste was discharged is located in the Murrieta hydrologic subarea. 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. A public supply well that was shut down by the California Department of Health Services (DHS) in September 2000 due to methyl-tertiary-butyl-ether (MTBE) contamination is downgradient and within 2,300 feet of the discharge.

Gasoline, benzene, toluene, ethylbenzene, xylene, MTBE, and tertiary butyl alcohol (TBA) 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 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 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 section 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 California Code of Regulations (CCR) Title 23, Chapter 16, section 2722(b). 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. Thirty days prior to initiating any interim remedial actions, the discharger shall notify the Regional Board in writing with a proposed workplan and schedule. The discharger shall implement the interim remedial actions within 30 days of submitting the workplan to the Regional Board.
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 **April 30, 2002**.
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 and the likely distribution of waste at the site. The SCM shall identify and describe the types of waste present including their distribution in space and time, and how the wastes are changing in space and time.

The SMC 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 (and those issues that do not need to be addressed).

The SCM shall be updated, as new information becomes available. Updates to the SCM should be included in all future technical reports submitted. The first SCM is due no later than **April 30, 2002**.

4. **Soil And Groundwater Investigation:** Continue the investigation currently underway to identify all wastes from the discharge and the horizontal and vertical extent of the wastes both on and off site to background levels in both the groundwater and soil. Determine the source, and nature of the discharge in the subsurface, and evaluate the impacts of the wastes on all sensitive receptors within 3,000 feet of the discharge. An adequate workplan and schedule for the next phase of this investigation is due on **March 15, 2002**.

The discharger shall execute the workplan and provide a technical report with the results from implementation of the workplan. Implementation of the workplan will commence no later than 60 days after submission of an adequate workplan. Within 60 days of the conclusion of the investigation a technical report that adequately characterizes the source, nature and extent (both laterally and vertically) of the discharge and addresses any contamination that has migrated off-site shall be submitted. 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) that satisfies the provisions of section 2725 of the regulations governing underground storage tanks (CCR, Title 23, Chapter 16 section 2600, et seq.). The CAP shall identify and discuss a range of remedial action alternatives for the final phase of the cleanup program including a schedule. The CAP shall consider mitigation of the following constituents in the affected groundwater zones: benzene, toluene, total xylenes, ethylbenzene, methyl tertiary butyl ether, tertiary butyl alcohol and any other waste which may have been released by the discharger. All free phase petroleum hydrocarbon product must be removed and any sources of petroleum hydrocarbon wastes must be removed. Implementation of the CAP will commence no later than 60 days after submission of the CAP to the Regional Board. Within 60 days of the conclusion of the investigation a technical report with the results to verify implementation of the CAP and evaluate its effectiveness shall be submitted to the Regional Board.

6. **Groundwater Cleanup Levels:** The discharger shall cleanup and abate the effects of the discharges in a manner that promotes the attainment of either background water quality or the best water quality which is reasonable 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 consistent with maximum benefit to the people of the state;
  - b. Not unreasonably affect present and anticipated beneficial use of such water; and
  - c. Not result in water quality less than that prescribe in the Basin Plan and Policies adopted by the State and Regional Boards.
  
7. **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 degrade water quality an/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.
  
8. All corrective actions shall be in accordance with the provisions of California Code of Regulations Title 23, Chapter 16 and the Cleanup and Abatement Policy in the Water Quality Control Plan for the San Diego Basin (9).

## B. PROVISIONS

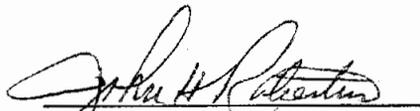
1. **No Nuisance:** The storage, handling, treatment, or disposal of soil containing petroleum hydrocarbon waste or polluted groundwater shall not create conditions of nuisance as defined in California Water Code section 13050(m). The discharger shall properly manage, treat and dispose of soils containing petroleum hydrocarbon waste and polluted groundwater in accordance with applicable federal, state and local regulations.

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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 EPA 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 of any changes in site occupancy or ownership associated with the property described in this Order.
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.

**C. PROHIBITIONS**

1. The discharge of wastes or hazardous substances in a manner that will degrade water quality or adversely affect the water quality needed to sustain beneficial uses of waters of the State is prohibited.
2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup, which will cause significant adverse migration of wastes or hazardous substances, are prohibited.



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

ARCO SERVICE STATION #3012  
27641 YNEZ ROAD  
TEMECULA, CA

1. **AUTHORITY AND PURPOSE:** The discharger is directed to submit the technical 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. R9-2002-0024.
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 EPA method 8015 for total petroleum hydrocarbons quantifying gasoline and diesel 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 31
Third Quarter (Jul-Sep)	Due no later than October 31
Fourth Quarter (Oct-Dec)	Due no later than January 31

This schedule shall commence with the submission of a quarterly monitoring report due on **April 30, 2002.**

The quarterly monitoring reports shall include:

- ◆ **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.
  
- ◆ **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 (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.
  
- ◆ **REPORTING GROUNDWATER RESULTS:**
  - Groundwater sampling data shall be presented in tabular form, and an isoconcentration map shall be prepared for constituents of concern (COCs) 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.
  - 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.
  - 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).
  - 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.
  - The report shall describe analytical methods used, detection limits obtained for each reported constituent, and a summary of QA/QC data.

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- 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.
  - Historical groundwater sampling results shall be put in tabular form and included in the fourth quarterly report each year.
  - 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>.
- ◆ **GROUNDWATER EXTRACTION:** If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other cleanup and abatement systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the fourth quarterly report each year.
- ◆ **STATUS REPORT:** The quarterly report shall describe relevant work completed during the reporting period (e.g. site investigation, interim remedial measures) 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 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 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 at the request of the 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.



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