



# California Regional Water Quality Control Board

## Los Angeles Region



Linda S. Adams  
Cal/EPA Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013  
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: <http://www.waterboards.ca.gov/losangeles> Arnold Schwarzenegger  
Governor

September 10, 2008

Mr. John Batchelder  
Atlantic Richfield Company  
4 Centerpointe Drive  
La Palma, CA 90623-1066

**UNDERGROUND STORAGE TANK PROGRAM – GENERAL WASTE DISCHARGE  
REQUIREMENTS FOR GROUNDWATER CLEANUP AT PETROLEUM HYDROCARBON  
FUEL, VOLATILE ORGANIC COMPOUND AND/OR HEXAVALENT CHROMIUM IMPACTED  
SITES (ORDER NO. R4-2007-0019) (SERIES NO. 071; CI NO. 9437)  
FORMER ARCO SERVICE STATION NO. 1796 (BC-1 SITE)  
6454 FOOTHILL BOULEVARD, TUJUNGA (CASE ID# 910420034A)**

Dear Mr. Batchelder:

We have completed our review of the application for coverage under the General Waste Discharge Requirements to install an Oxygen Release Compound (ORC) filter socks into offsite groundwater wells beneath the subject site (the Site):

There are currently twenty three groundwater monitoring wells onsite and offsite. Groundwater monitoring has been conducted at the Site since November 1991. The Site is located within the San Fernando/Verdugo Basin. Depth to groundwater in the on- and off-Site groundwater monitoring wells ranged from 40.43 (MW-16) to 144.39 (MW-17) feet. The groundwater flow direction was to the north.

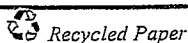
During the Fourth Quarter 2007, MW-1 indicated the highest MTBE concentrations, however, MTBE concentrations in MW-1 decreased from the previous quarter (59,000  $\mu\text{g/L}$ ) to the first quarter 2008 (26,000  $\mu\text{g/L}$ ). Additionally, MTBE was not detected in MW-12 in the first quarter 2008, compared to the low concentration detected previously (7.5  $\mu\text{g/L}$ ). The dissolved-phase hydrocarbon plume is fully defined in all directions around the Site.

In a Remedial Action Plan (RAP) dated May 15, 2007, SECOR, the Discharger's consultant, proposed the following addendum to the existing remedial system:

- Installation of dedicated pumps in wells MW-2, MW-4 and MW-5;
- Installation of oxygen diffusers in offsite wells MW-12, MW-14, MW-22 and MW-23, and reinstallation of the oxygen diffuser in MW-1;
- Installation of oxygen socks or similar technology in offsite wells MW-8 and MW-9; and
- Installation of a dedicated groundwater treatment system for onsite disposal of treated groundwater to the sewer.

In a letter dated June 25, 2007, Regional Board staff approved the RAP.

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Mr. John Batchelder  
Atlantic Richfield Company

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September 10, 2008

On May 29, 2008, SECOR submitted an application for WDR, which indicated that ORC filter socks will be placed in the offsite monitoring wells MW-8 and MW-9 due to accessibility restriction at the Foothill Boulevard in Tujunga.

Based on our review, Regional Board staff has determined that the proposed discharge meets the conditions specified in Order No. R4-2007-0019, "*Revised General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel, Volatile Organic Compound and/or Hexavalent Chromium Impacted Sites*" adopted by the Regional Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2007-0019, Monitoring and Reporting Program No. CI-9437, and Standard Provisions.

The WDRs issued shall not be rescinded until Regional Board staff determine the WRDs are no-longer needed for the site cleanup.

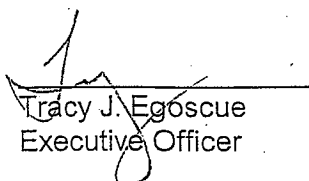
The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2007-0019. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board, please reference Compliance File No. CI-9437 to ensure that the reports are directed to the appropriate staff. Do not combine other reports with your monitoring reports complying with Order No. R4-2007-0019. Submit each type of report as a separate document.

We are sending a copy of Order No. R4-2007-0019 only to the applicant. A copy of the Order will be furnished to anyone who requests it. A copy of the Order can also be found online at: [http://www.waterboards.ca.gov/losangeles/board\\_decisions/adopted\\_orders/R4-2007-0019/R4-2007-0019.pdf](http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/R4-2007-0019/R4-2007-0019.pdf)


If you have any questions on Order No. R4-2007-0019, please contact Ms. Rebecca Chou at (213) 620-6156. Questions regarding the underground storage tank issues should be forwarded to Mr. Magdy Baiady at (213) 576-6699.

Sincerely,

  
Tracy J. Egoscue  
Executive Officer

- Enclosures: 1. Board Order No. R4-2007-0019  
2. Monitoring and Reporting Program No. CI-9437

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Mr. John Batchelder  
Atlantic Richfield Company

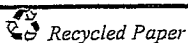
- 3 -

September 10, 2008

cc: Yvonne Shanks, Underground Storage Tank Cleanup Fund, State Water Resources  
Control Board  
Stantec Consulting Corp.  
Mark Mackowski, ULARA Watermaster  
Tim Smith, County of Los Angeles, Department of Public Works  
Kurt Souza, State Department of Health Services, Environmental Health Division  
Peter Kavounas, City of Glendale Water & Power  
David Gould, Crescenta Valley Water District  
Gareth Roberts, Secor International, Inc.  
Katherine M. Sommers, property owner, 1301 Yellowood Drive, Hemet, CA 92545  
Mekhitarist Fathers of Vienna, 4900 Maryland Ave., La Crescenta, CA 91214-1245

6454 Foothill WDR cover ltr (7-21-08)

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# California Regional Water Quality Control Board Los Angeles Region



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

Linda S. Adams  
Agency Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013  
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: <http://www.waterboards.ca.gov/losangeles>

Arnold Schwarzenegger  
Governor

June 25, 2007

Mr. John Batchelder  
Atlantic Richfield Company  
4 Centerpointe Drive  
La Palma, CA 90623-1066

**UNDERGROUND STORAGE TANK PROGRAM – METHYL TERTIARY BUTYL ETHER  
POLLUTION INVESTIGATION OF THE CRESCENTA VALLEY WATER DISTRICT WELL  
FIELD (FILE NO. 05-225)  
FORMER ARCO SERVICE STATION NO. 1796 (BC-1 SITE)  
6454 FOOTHILL BOULEVARD, TUJUNGA (CASE ID# 910420034A)**

Dear Mr. Batchelder:

We have received the "First Quarter 2007 Status report/Remedial Progress Update" dated May 15, 2007 and "Additional Site Assessment Report" dated May 15, 2007. These reports were submitted by your consultant, Secor International Inc., in response to our January 31, 2007 letter for the subject site (Site). This letter intends to provide Regional Board staff comments upon reviewing the reports.

**Site Assessment and Corrective Action Update**

From February 1 to March 20, 2007, ten additional groundwater monitoring wells (MW-14 through MW-23) were installed offsite to a maximum depth of 160 feet below ground surface (bgs).

Currently, the site has 23 groundwater monitoring wells (MW-1 through MW-23); one air sparge well (AS-1) and three soil vapor extraction wells (SVE-2, SVE-4 and SVE-5). Quarterly groundwater monitoring has been conducted since May 2003. Historically, up to 210,000 µg/L of TPHg, 16,000 µg/L of benzene, 360,000 µg/L of MTBE and 47,000 µg/L of TBA were detected in the groundwater beneath the site. In March 2007, up to 70,000 µg/L of TPHg (MW-2), 5,800 µg/L benzene (MW-4), 48,000 µg/L of MTBE (MW-4), and 12,000 µg/L of TBA (MW-4) were detected in the groundwater. Depth to groundwater was measured at approximately 93 feet bgs at the Site and the groundwater flow direction was toward the north and northeast.

Since April 25, 2006, a soil vapor extraction (SVE) system and oxygen diffusion system has been operated at the site. As of March 31, 2007, the system has removed a total of 17,457 pounds of petroleum hydrocarbons. Additionally, approximately 13,145 gallons of contaminated groundwater were pumped out from monitoring well MW-4 as of March 20, 2007.

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### Continuous Quarterly Groundwater Monitoring Requirements

1. As stated in our letter dated January 31, 2007, quarterly groundwater monitoring must be continued and quarterly monitoring reports must be submitted according to the following schedule, with the next monitoring report due by **July 15, 2007**:

<u>Reporting Period</u>	<u>Report Due Date</u>
January – March	April 15 <sup>TH</sup>
April – June	July 15 <sup>TH</sup>
July – September	October 15 <sup>TH</sup>
October – December	January 15 <sup>TH</sup>

2. All other requirements stated in our January 31, 2007 letter must be complied with.

### General Requirements

1. Copies of **future** technical reports shall also be sent directly to the property owner of the site and to any other property owner(s) impacted by the underground storage tank (UST) releases from the site. The cover letter transmitting your technical reports to this Regional Board shall state that the technical reports were sent directly to all the property owner(s) of the site as well as any offsite property owner impacted by the release(s). The cover letter shall provide a list of all property owners sent technical reports and the date the reports were sent.
2. Pursuant to State Water Resources Control Board Resolution No. 92-49, under Water Code Section 13304, all fieldwork related to subsurface investigation including well installation must be conducted by, or under the direct responsible supervision of, a licensed California Professional Geologist (PG) or Civil Engineer (PE). All technical documents submitted to this Regional Board must be reviewed and signed and/or stamped by a licensed California PG or PE with at least five years subsurface hydrogeologic experience.
3. All necessary permits for well installation and/or abandonment must be obtained from the appropriate agencies prior to the start of work.

You are hereby directed to submit a technical report by **July 15, 2007**. Failure to submit the technical report by the above-mentioned due date, in format and content acceptable to the Executive Officer of the Regional Board, may result in an enforcement action by the Regional Board. A Cleanup and Abatement Order (CAO) may be issued pursuant to section 13304 of the California Water Code. Monetary assessment may apply for any violations of the CAO.

Mr. John Batchelder  
Atlantic Richfield Company

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June 25, 2007.

If you have any questions on this matter, please contact Mr. Magdy Baiady at (213) 576-6699 or Mbaiady@waterboards.ca.gov.

Sincerely,

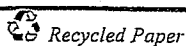
*Original Signed by David Bacharowski for*

Deborah J. Smith  
Interim Executive Officer

Cc: Yvonne Shanks, Underground Storage Tank Cleanup Fund, State Water Resources Control Board  
Mark Mackowski, ULARA Watermaster  
Tim Smith, County of Los Angeles, Department of Public Works  
Kurt Souza, State Department of Health Services, Environmental Health Division  
Peter Kavounas, City of Glendale Water & Power  
David Gould, Crescenta Valley Water District  
Gareth Roberts, Secor International, Inc.  
Katherine M. Sommers, property owner, 1301 Yellowood Drive, Hemet, CA 92545  
Mekhitarist Fathers of Vienna, 4900 Maryland Ave., La Crescenta, CA 91214-1245

6454 Foothill RAP approval (6-15-07)

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# FACT SHEET

(Do Not Mail)

## WASTE DISCHARGE REQUIREMENTS

For

FORMER ARCO STATION NO. 1796

6454 FOOTHILL BOULEVARD

TUJUNGA, CALIFORNIA

ORDER NO. R4-2007-0019, UST FILE NO. 910420034A, CI-9437, SERIES NO. 071

### FACILITY ADDRESS

Former ARCO Station  
6454 Foothill Blvd.  
Tujunga, CA

### RESPONSIBLE PARTY (RP)

John Patchelder  
4 Centerpoint Drive  
La Palma, CA 90623-1066

### RP'S CONSULTANT

Stantec Consulting Corp.  
290 Conejo Ridge Ave.,  
Thousand Oaks, CA 91361

### Site Background

- The subject site (Site) is located at 6454 Foothill Boulevard, La Crescenta, and is currently an inactive vacant property with unoccupied service station building and dispenser island canopy with no underground storage tank(s) (USTs) or product pipelines. The site is owned by Ms. Katherine M. Sommers of Hemet, California.
- As early as December 1952, there were two 4,000-gallon USTs located at the eastern portion of the site, however, there is no documentation of the removal of these two USTs.
- Atlantic Richfield Company (ARCO) (hereinafter Discharger) has leased the property since 1983. From 1983 to 1992, the Discharger leased the property from Mr. James Mandliak, and from 1992 to June 2004 from the current owner Ms. Sommers. ARCO used the site as a retail gasoline station from 1983 to 2004.
- In 1983, two 4,000 gallon and two 6,000 gallon USTs were reportedly removed from the site and in 1984, three 12,000 gallon USTs, one 550-gallon used oil tank, and six fuel dispensers with associated product piping were installed. There was no report documenting the tank removal in 1983.
- Site assessment conducted in 1991, included the installation of seven vapor wells (EA-1 through EA-7) and in one soil boring (B-8) detected total petroleum hydrocarbons as gasoline (TPHg) of 3,300 milligrams per kilogram (mg/kg), benzene of 1.9 mg/kg, toluene of 8.8 mg/kg, ethylbenzene of 4.8 mg/kg, and xylene of 22 mg/kg at a depth of 25 feet below ground surface (bgs).
- In January 1994, three 12,000-gallon USTs and one 550 gallon used oil UST were replaced by four 10,000-gallon gasoline and one 550 gallon fiberglass double wall USTs, with new product lines and fuel dispensers.
- During the tank removal in 1994, soil samples collected beneath the former UST excavation pit (approximately 12-14 feet bgs) and waste oil tank, dispensers and associated piping, detected concentrations of 7,300 mg/kg of TPHg, 8 mg/kg of benzene, 42 mg/kg of toluene, 16 mg/kg of ethylbenzene, and 250 mg/kg of xylenes.

- In November 4, 1998, the Discharger received a case closure letter from the City of Los Angeles Fire Department (LAFD) which stated that it had no further actions required at that time.
- In March 2002, four 10,000 gallon gasoline USTs and one 550 gallon waste oil UST were removed from the site. Soil samples collected during the tank removal detected Methyl Tertiary Butyl Ether (MTBE) of 0.03 mg/kg and tertiary butanol (TBA) of 0.11 mg/kg beneath the USTs and dispenser islands, and was non-detect for TPHg and BTEX. At that time, the LAFD issued a directive requesting a site assessment to be conducted to assess the vertical and horizontal extent of hydrocarbon impacted soil at the site.
- Between February and June 2003, ten soil borings were completed to depths ranging from 40 to 110 feet bgs. Three of the soil borings were converted to soil vapor extraction wells (SVE-1, SVE-2 and SVE-3) and three were converted to groundwater monitoring wells (MW-1, MW-2 and MW-3). Soil samples from the investigation detected up to 6,500 mg/kg of TPHg, 6.2 mg/kg of benzene, 19 mg/kg of toluene, 75 mg/kg of ethylbenzene, 390 mg/kg of xylene and 45 mg/kg of MTBE. Groundwater samples detected up to 64,000 micrograms per liter ( $\mu\text{g/L}$ ) of TPHg, 4,000  $\mu\text{g/L}$  of benzene, 4,500  $\mu\text{g/L}$  of toluene, 1,200  $\mu\text{g/L}$  of ethylbenzene, 12,000  $\mu\text{g/L}$  of xylene, 18,000  $\mu\text{g/L}$  of MTBE and 7,400  $\mu\text{g/L}$  of TBA. Groundwater was encountered at approximately 95 feet bgs.
- On July 21, 2004, the Regional Board approved a workplan for additional groundwater assessment and air sparge/soil vapor extraction pilot testing for the site. In August 2004, seven soil borings ranged in depth of 63 to 110 feet bgs were completed. Two borings were converted to dual-nested soil vapor extraction (SVE) wells (SVE-4 and SVE-5), three borings were converted to groundwater monitoring wells (MW-5, MW-6 and MW-7), one boring was converted to a dual nested groundwater monitoring and SVE well (MW-4/SVE-7), and one boring was converted to a dual-nested air sparging/soil vapor extraction (AS/SVE) well (AS-1/SVE-6).
- In December 2005, three offsite groundwater monitoring wells (MW-8 through MW-10) to the north and east, one air sparge well (AS-1) and three soil vapor extraction wells (SVE-2, SVE-4 and SVE-5) were installed at the site.
- ARCO developed a Remedial Action Plan (RAP) dated August 2004, and amended it in December 2004. AS/SVE pilot test was performed utilizing wells SVE-3, SVE-5, SVE-7, MW-2, and AS-1. The estimated radius of influence (ROI) was calculated at 30 feet in the shallow zone, 35 feet in the middle zone and 60 feet in the deep zone wells. Based on the AS/SVE pilot test, the consultant concluded that SVE appears to be a viable option for soil remediation; however, Regional Board staff disagreed technically that the AS is the best option for remediation of the groundwater beneath the site. As a result, the Discharger proposed to conduct SVE in combination with oxygen diffusion and to install six oxygen diffusers in existing groundwater monitoring wells MW-1 through MW-6. Regional Board staff approved the amended RAP in a letter dated April 22, 2005.
- In August 2006, Regional Board staff approved additional assessment and installation of groundwater monitoring to fully define the extent of the offsite groundwater contaminated



plume. Additionally, the Regional Board staff verbally approved the installation of three additional offsite groundwater monitoring wells (one west of MW-8, one east of MW-9, and one northwest of MW-8), as proposed in the workplan dated August 11, 2006, by SECOR.

- The Site is located within the Crescenta Valley Water District and the San Fernando/Verdugo Groundwater Basin. According to boring logs and cross section maps, the subsurface lithology of the Site consists of silty clay, sandy clay, sand and gravel from ground surface to a depth of approximately 140 feet below ground surface (bgs).

### Description of the Remedial Action and Waste Discharge

- In a letter dated June 27, 2007, staff approved the Remedial Action plan that consists of the following:
  1. Installation of dedicated pumps in wells MW-2, MW-4 and MW-5;
  2. Installation of oxygen diffusers in offsite wells MW-12, MW-14, MW-22 and MW-23, and reinstallation of the oxygen diffuser in MW-1;
  3. Installation of oxygen socks or similar technology in offsite wells MW-8 and MW-9; and
  4. Installation of a dedicated groundwater treatment system for onsite disposal of treated groundwater to the sewer.
- On May 29, 2008, SECOR submitted an application for WDR, which indicated that ORC filter socks will be placed in the offsite monitoring wells MW-8 and MW-9 due to accessibility restriction at the Foothill Boulevard in Tujunga.

### Justification for General Waste Discharge Requirements

The proposed installations of ORC filter socks in MW-8 and MW-9, satisfies all the criteria for enrollment under Board Order No. R4-2007-0019. These criteria include:

- **Purpose of the Discharge** – The purpose of the proposed discharge is to remediate the soil and groundwater contamination beneath the Site.
- **Discharger must have an approved Remedial Action Plan** – Regional Board staff approved a workplan on June 27, 2007.
- **CEQA requirements** – The Regional Board has prepared an Initial Study and Mitigated Negative Declaration for the issuance of these general waste discharge requirements in accordance with the provisions of the California Environmental Quality Act (CEQA).
- **Discharge has a rating of 3-A** – Any potential adverse water quality impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective uses of groundwater. Groundwater quality will be monitored to verify no long-term adverse impact to water quality.
- **Local agency requirements** – Regional Board is the lead oversight agency for the Site.

- **Application/Annual Fee** –Regional Board staff received a check in the amount of \$3,380 from the Discharger on June 20, 2008.

**Recommendation**

Staff recommends enroll the subject discharge under coverage of Order No. R4-2007-0019.

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
MONITORING AND REPORTING PROGRAM NO. CI-9437

FOR  
ATLANTIC RICHFIELD COMPANY  
FORMER ARCO SERVICE STATION NO. 1796  
ENROLLMENT UNDER REGIONAL BOARD

ORDER NO. R4-2007-0019  
SERIES NO. 071

I. REPORTING REQUIREMENTS

- A. Atlantic Richfield Company (ARCO) (hereinafter Discharger) shall implement this monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2007-0019.

Monitoring reports shall be received by the due dates in the following schedule:

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

The first monitoring report under this monitoring program is due by October 15, 2008.

- B. If there is no discharge or injection during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.
- C. By January 30 of each year, beginning January 30, 2009, the Discharger shall submit an annual summary report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous calendar year. In addition, the Discharger shall explain the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements (WDR).
- D. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with the WDR. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements, as well as all excursions of effluent limitations.

E. In addition to the aforementioned requirements, the Discharger shall comply with requirements contained in Section G of Order No. R4-2007-0019 "Monitoring and Reporting Requirements".

II. DISCHARGE MONITORING REQUIREMENTS

The quarterly reports shall contain the following information regarding the installation of ORC filter socks in offsite wells MW-8 and MW-9. If there is no injection during any reporting period, the report shall so state:

1. Location map showing the two well locations.
2. Written summary defining:
  - Depth of installation points; and
  - Quantity of the ORC release at each point
3. Monthly visual inspection at each well shall be conducted to evaluate the well casing integrity for a period of three months after application. The quarterly report shall include a summary of the visual inspection.

III. GROUNDWATER MONITORING PROGRAM

A groundwater-monitoring program shall be designed to detect and evaluate impacts associated with the injection activities. This site contains twenty three onsite and offsite monitoring well network (see attached map). The monitoring network for this Monitoring Program consists of the following wells: MW-10 and MW-12 as upgradient wells; MW-8 and MW-9 as source wells; and MW-23 and MW-22 as downgradient wells. These sampling stations shall not be changed and any proposed change of monitoring locations shall be identified and approved by the Regional Board Executive Officer (Executive Officer) prior to their use. The Discharger shall conduct a baseline sampling from all monitoring wells one or two weeks prior to the proposed ORC filter socks installation and regular sampling with the required frequencies from all the monitoring wells in the monitoring network for the following constituents:

<u>CONSTITUENT</u>	<u>UNITS</u> <sup>1</sup>	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u>
pH <sup>4</sup>	PH units	Grab	Quarterly <sup>2</sup>
Temperature <sup>3</sup>	°F	grab	Quarterly <sup>2</sup>
Oxidation-reduction potential <sup>3</sup>	Milivolts	grab	Quarterly <sup>2</sup>
Specific conductivity <sup>3</sup>	µmhos/cm	grab	Quarterly <sup>2</sup>
Ferrous iron	µg/L	grab	Quarterly <sup>2</sup>
Dissolved Oxygen <sup>3</sup>	µg/L	grab	Quarterly

MTBE	µg/L	grab	Quarterly
Tert-Butyl Alcohol (TBA)	µg/L	grab	Quarterly
Di-isopropyl Ether (DIPE)	µg/L	grab	Quarterly
Ethyl-t-Butyl Ether (ETBE)	µg/L	grab	Quarterly
Tert-Amyl-Methyl Ether (TAME)	µg/L	grab	Quarterly
Acetone	µg/L	grab	Quarterly
Formaldehyde	µg/L	grab	Quarterly
Total Petroleum Hydrocarbons as gasoline (TPH <sub>g</sub> )	µg/L	grab	Quarterly
Benzene	µg/L	grab	Quarterly
Ethylbenzene	µg/L	grab	Quarterly
Toluene	µg/L	grab	Quarterly
Total xylenes	µg/L	grab	Quarterly
Methane	µg/L	grab	Quarterly
Total organic carbon	µg/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
Carbon dioxide	mg/L	grab	Quarterly
Manganese	µg/L	grab	Quarterly
Total iron	µg/L	grab	Quarterly
Alkalinity	µg/L	grab	Quarterly
Total Chromium and Chromium (VI) <sup>4</sup>	mg/L	grab	Quarterly
Total dissolved solids, Arsenic, Bromide, Lead, Nickel, Cadmium	mg/L	Grab	Quarterly

<sup>1</sup> mg/L: milligrams per liter; µg/L: micrograms per liter; µmhos/cm: microohms per centimeter; °F: degree Fahrenheit.

<sup>2</sup> Quarterly sampling events are required after the first month of injection.

<sup>3</sup> Field instrument will be used to test for this constituent.

<sup>4</sup> The Discharger is required to monitor for total chromium and chromium six in the baseline, second and fourth quarterly sampling. If detected at any of these sampling events, the total chromium and chromium six must be monitored quarterly thereafter.

All groundwater monitoring reports must include, at a minimum, the following:

- a. Well identification, date and time of sampling;
- b. Sampler identification, and laboratory identification;
- c. Quarterly observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

IV. MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

V. CERTIFICATION STATEMENT

Each report shall contain the following completed declaration:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Executed on the \_\_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_.

\_\_\_\_\_  
(Signature)

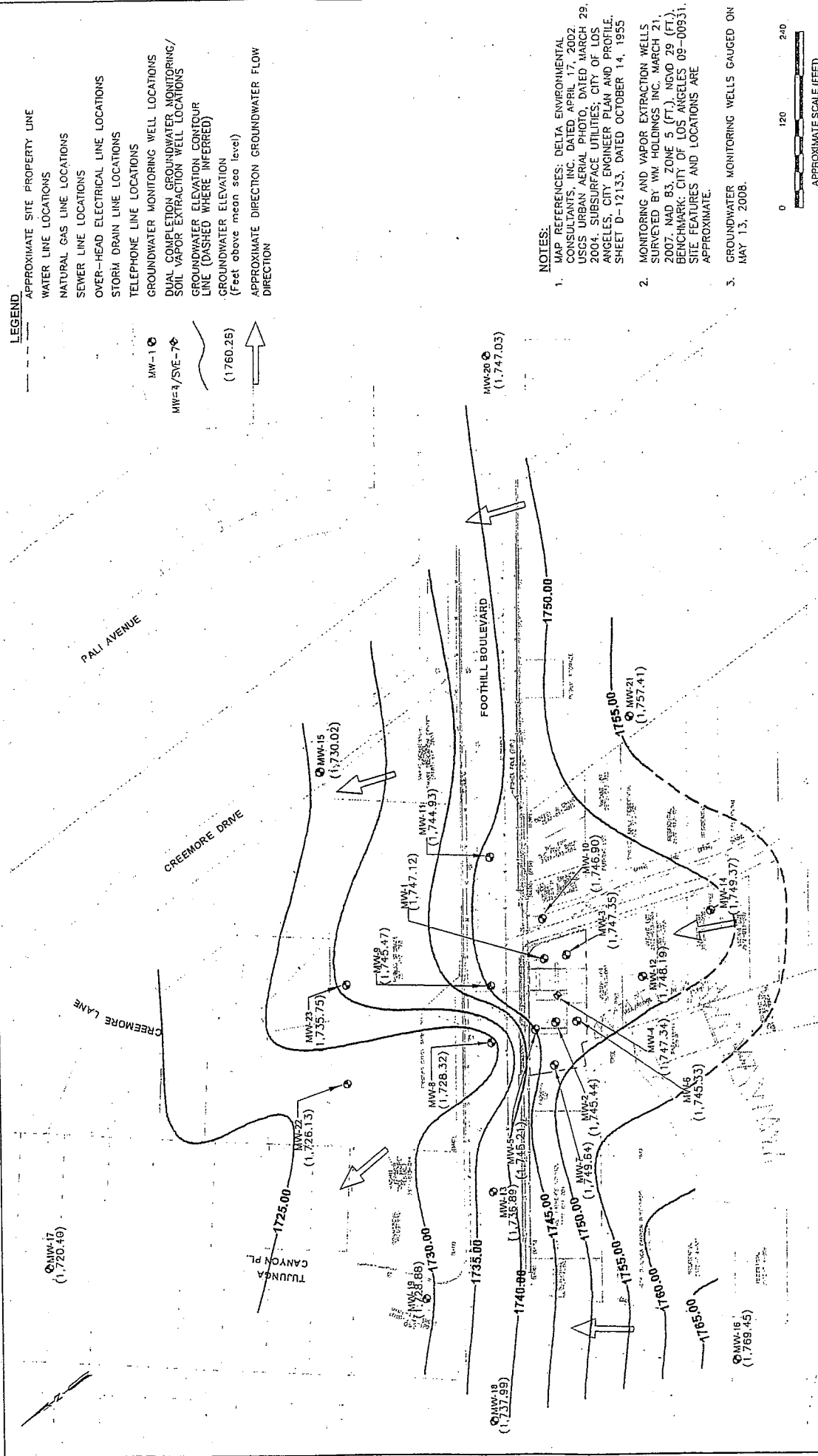
\_\_\_\_\_  
(Title)"

All records and reports submitted in compliance with this Order are public documents and will be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region, upon request by interested parties. Only proprietary information, and only at the request of the Discharger, will be treated as confidential.

Ordered by:

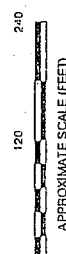
  
\_\_\_\_\_  
Tracy J. Egoscue  
Executive Officer

Date: September 10, 2008



- LEGEND**
- APPROXIMATE SITE PROPERTY LINE
  - WATER LINE LOCATIONS
  - NATURAL GAS LINE LOCATIONS
  - SEWER LINE LOCATIONS
  - OVER-HEAD ELECTRICAL LINE LOCATIONS
  - STORM DRAIN LINE LOCATIONS
  - TELEPHONE LINE LOCATIONS
  - MW-1
  - MW-2/SVE-7
  - (1760.26)
  - GROUNDWATER MONITORING WELL LOCATIONS
  - DIAL COMPLETION GROUNDWATER MONITORING/SOIL VAPOR EXTRACTION WELL LOCATIONS
  - GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)
  - GROUNDWATER ELEVATION (Feet above mean sea level)
  - APPROXIMATE DIRECTION GROUNDWATER FLOW DIRECTION

- NOTES:**
- MAP REFERENCES: DELTA ENVIRONMENTAL CONSULTANTS, INC. DATED APRIL 17, 2002; USGS URBAN AERIAL PHOTO, DATED MARCH 29, 2004; SUBSURFACE UTILITIES; CITY OF LOS ANGELES; CITY ENGINEER PLAN AND PROFILE, SHEET D-12133, DATED OCTOBER 14, 1955.
  - MONITORING AND VAPOR EXTRACTION WELLS SURVEYED BY WM HOLDINGS INC. MARCH 21, 2007. NAD 83, ZONE 5 (FT.), NGVD 29 (FT.). BENCHMARK: CITY OF LOS ANGELES 09-00931. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
  - GROUNDWATER MONITORING WELLS GAUGED ON MAY 13, 2008.



FOR		ATLANTIC RICHFIELD COMPANY FORMER STATION NO. 1795 5454 Foothill Boulevard Tujunga, California	FIGURE	4					
JOB NUMBER:	37BP-D1795-150396	DRAWN BY:	J.Barbera	CHECKED BY:	M.Masim	APPROVED BY:	G.Roberts	DATE:	1/15/08
 <b>Stantec</b> 280 Condie Ridge Avenue, Suite 200 Thousand Oaks, CA 91320 (805) 226-2800 (fax) (805) 226-1277 (cell)									