



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

July 29, 2010

Mr. Danny Monson
Atlantic Richfield Company
4 Centerpointe Drive
La Palma, CA 90623

**GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER CLEANUP AT
PETROLEUM HYDROCARBON FUEL, VOLATILE ORGANIC COMPOUND AND/OR
HEXAVALENT CHROMIUM IMPACTED SITES
ARCO STATION NO. 5093 (B-1 SITE)
21943 WILMINGTON AVENUE, CARSON, CA (CASE NO. I-10154)
(ORDER NO. R4-2007-0019, SERIES NO. 132; CI NO. 9615)**

Dear Mr. Monson:

We have completed our review of your application for coverage under the General Waste Discharge Requirements for oxygen release compound application at the site referenced above in Carson, California, for groundwater cleanup and remediation.

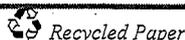
The site is currently a plumbing company located at the northwest corner of Wilmington Avenue and 220th Street in Carson, California (Site) (Figure 1) (Latitude: N 33° 49' 42.68", Longitude: W 118° 14' 26.81").

In July 1989, five underground storage tanks were removed from the Site. Site investigations found soil and groundwater contaminations beneath the Site. Periodic groundwater monitoring program was initiated in 1993. The most recent monitoring data showed the maximum total petroleum hydrocarbon as gasoline (TPHg) concentration at 53,000 µg/L, benzene concentration at 11,000 µg/L, methyl tertiary butyl ether (MTBE) concentration at 800 µg/L, and tertiary butyl alcohol (TBA) concentration at 14,000 µg/L.

Stantec (formerly Secor International, Incorporated) prepared "Atlantic Richfield Company Site Conceptual Model Update and Revised Remedial Action Plan First Quarter" (the RAP) dated April 2007, for the subject site to inject oxygen release compounds, RegenOx and ORC Advanced into the saturation zone to enhance intrinsic bioremediation of residual fuel constituents in the groundwater (See Figure 2 for injection locations). Regional Board staff directive letter dated June 20, 2007 approved the RAP.

Regional Board staff has determined that the proposed discharge of RegenOx 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 (General WDR)," adopted by the Los Angeles Regional Water Quality Control Board on March 1, 2007. The General WDR does not cover the discharge of ORC Advanced, which will require an individual waste discharge requirement.

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Mr. Danny Monson
Arco Station No. 5093

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Enclosed are your Waste Discharge Requirements, consisting of General WDRs Board Order No. 2007-0019 and Monitoring and Reporting Program No. CI-9615 and Standard Provisions.

The WDRs issued shall not be terminated until Regional Board staff determines the WDRs are no longer needed for the subject site.

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 per these requirements, please include a reference to Compliance File No. CI-9615 to assure that the reports are directed to the appropriate file and staff. Do not combine other reports with your monitoring reports. 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, or on line at:

http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/general_orders/r4-2007-0019/r4-2007-0019.pdf

To avoid paying future annual fees, please submit written request for termination of your enrollment under the general permit in a separate letter, when your project has been completed and the permit is no longer needed. Be aware that the annual fee covers the fiscal year billing period beginning July 1 and ending June 30, the following year. You will pay the full annual fee if your request for termination is made after the beginning of the new fiscal year beginning July 1.

If you have any questions, please contact Ms. Rebecca Chou at (213) 620-6156 or rchou@waterboards.ca.gov. Questions regarding the UST issues should be forwarded to Mr. Jimmie Woo at (213) 576-6698 or jwoo@waterboards.ca.gov.

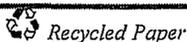
Sincerely,


Samuel Unger
Interim Executive Officer

Enclosures: 1. Board Order No. R4-2007-0019
2. Monitoring and Reporting Program No. CI-9615
3. Standard Provisions

cc: Kathy Jundt, State Water Resources Control Board, Underground Storage Tank Cleanup Fund
Nancy Matsumoto, Water Replenishment District of Southern California
Tim Smith, Los Angeles Department of Public Works, Environmental Programs Division
Andrew Modugno, Stantec

California Environmental Protection Agency



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STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
MONITORING AND REPORTING PROGRAM NO. CI-9615
for
ARCO STATION NO. 5093
21943 WILMINGTON AVENUE, CARSON, CA
(REGENOX (ORC) FOR GROUNDWATER CLEANUP)
(ORDER NO. R4-2007-0019, SERIES NO. 132)

I. REPORTING REQUIREMENTS

- A. Atlantic Richfield Company (hereinafter Discharger) shall implement this monitoring program on the effective date of Regional Board Order No. R4-2007-0019. The first monitoring report under this program shall be received at the Regional Board by **January 15, 2011**. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January – June	July 15 th
July – December	January 15 th

Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.

- B. If there is no discharge or injection during any reporting period, the report shall so state.
- C. Laboratory analyses – all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP). A copy of the laboratory certification shall be provided each time a new and/or renewal certification is obtained from ELAP.
- D. The method limits (MLs) employed for effluent analyses shall be lower than the permit limits established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable and obtains approval for a higher ML from the Regional Board Executive Officer (Executive Officer). The Discharger shall submit a list of the analytical methods employed for each test and the associated laboratory quality assurance/quality control (QA/QC) procedures upon request by the Regional Board.
- E. Groundwater samples must be analyzed within allowable holding time limits as specified in 40 CFR Part 136. All QA/QC samples must be run on the same dates when samples were actually analyzed. The Discharger shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff.
- F. Each monitoring report must affirm in writing that "All analyses were conducted at a laboratory certified for such analyses by the California Department of Health Services, and in accordance with current United States Environmental Protection Agency (USEPA) guideline procedures or as specified in this Monitoring Program." Proper chain of custody procedures must be followed and a copy of the completed chain of custody form shall be submitted with the report.

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- G. 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 WDRs. This section shall be located at the front of the report and shall clearly list all non-compliance with WDRs, as well as all excursions of effluent limitations.
- H. The Discharger shall maintain all sampling and analytical results: date, exact place, and time of sampling; dates analyses were performed; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained 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.
- I. If the Discharger performs analyses on any groundwater samples more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the report.
- J. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized to demonstrate compliance with the requirements and, where applicable, shall include results of receiving water observations.
- K. The Discharger should not implement any changes to the Monitoring and Reporting Program prior to receiving Executive Officer's written approval.

II. DISCHARGE MONITORING REQUIREMENTS

The reports shall contain the following information regarding injection activities:

1. Location map showing application area.
2. Written summary defining:
 - Depth of insertion and depth to groundwater;
 - Quantity of ORC per area; and
 - Total amount of ORC applied at site.
3. Groundwater monitoring wells shall not be used as ORC injection points.

III. GROUNDWATER MONITORING PROGRAM

A groundwater-monitoring program shall be designed to detect and evaluate impacts associated with the ORC application. The monitoring program shall consist of upgradient well GW-3, source wells GW-1, GW-13, and GW-14, and downgradient wells GW-5 and GW-11 (See Figure 1). A baseline monitoring and sampling shall be conducted prior to the proposed

ORC application. Baseline monitoring will establish the initial conditions with respect to the contaminant levels. These sampling stations shall not be changed and any proposed change of monitoring locations shall be identified and approved by the Executive Office. The Discharger shall conduct baseline sampling one or two weeks prior to ORC application and regular sampling with the required frequencies from the up-gradient, down-gradient, and source monitoring wells for the following constituents:

<u>CONSTITUENT</u>	<u>UNITS</u> ¹	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u>
pH ²	PH units	Grab	Semi-Annually
Temperature ²	°F	grab	Semi-Annually
Oxidation-reduction potential ²	Milivolts	grab	Semi-Annually
Specific conductivity ²	µmhos/cm	grab	Semi-Annually
Ferrous iron	µg/L	grab	Semi-Annually
Dissolved Oxygen ²	µg/L	grab	Semi-Annually
MTBE	µg/L	grab	Semi-Annually
Tert-Butyl Alcohol (TBA)	µg/L	grab	Semi-Annually
Di-isopropyl Ether (DIPE)	µg/L	grab	Semi-Annually
Ethyl-t-Butyl Ether (ETBE)	µg/L	grab	Semi-Annually
Tert-Amyl-Methyl Ether (TAME)	µg/L	grab	Semi-Annually
Acetone	µg/L	grab	Semi-Annually
Formaldehyde	µg/L	grab	Semi-Annually
Total Petroleum Hydrocarbons as gasoline (TPHg)	µg/L	grab	Semi-Annually
Carbon tetrachloride	µg/L	grab	Semi-Annually
Benzene	µg/L	grab	Semi-Annually
Ethylbenzene	µg/L	grab	Semi-Annually
Toluene	µg/L	grab	Semi-Annually
Total xylenes	µg/L	grab	Semi-Annually
Methane	µg/L	grab	Semi-Annually
Total organic carbon	µg/L	grab	Semi-Annually
Total dissolved solids	mg/L	grab	Semi-Annually

Sulfate	mg/l	grab	Semi-Annually
Chloride	mg/L	grab	Semi-Annually
Boron	mg/L	grab	Semi-Annually
Carbon dioxide	mg/L	grab	Semi-Annually
Manganese	µg/L	grab	Semi-Annually
Total iron	µg/L	grab	Semi-Annually
Alkalinity	µg/L	grab	Semi-Annually
Chromium (VI) ³	mg/L	grab	Semi-Annually ³
Total Chromium ³	mg/L	grab	Semi-Annually ³

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

² Field instrument will be used to test for this constituent.

³ The Discharger is required to monitor for total chromium and chromium six in the baseline, second and fourth semi-annual sampling. If detected at any of these sampling events, the total chromium and chromium six must be monitored semi-annually thereafter.

All groundwater monitoring reports must include, at 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 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)

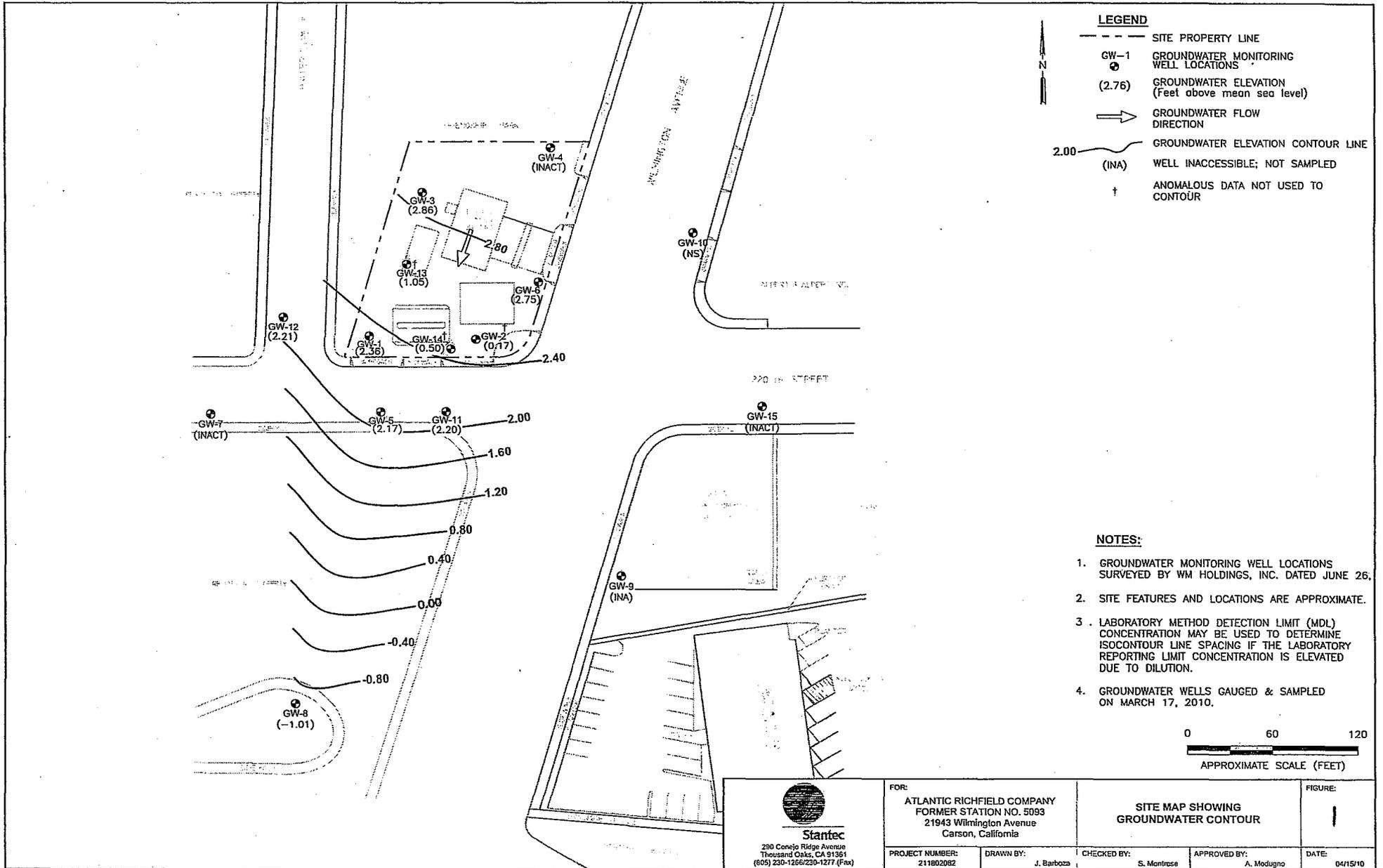
(Title)"

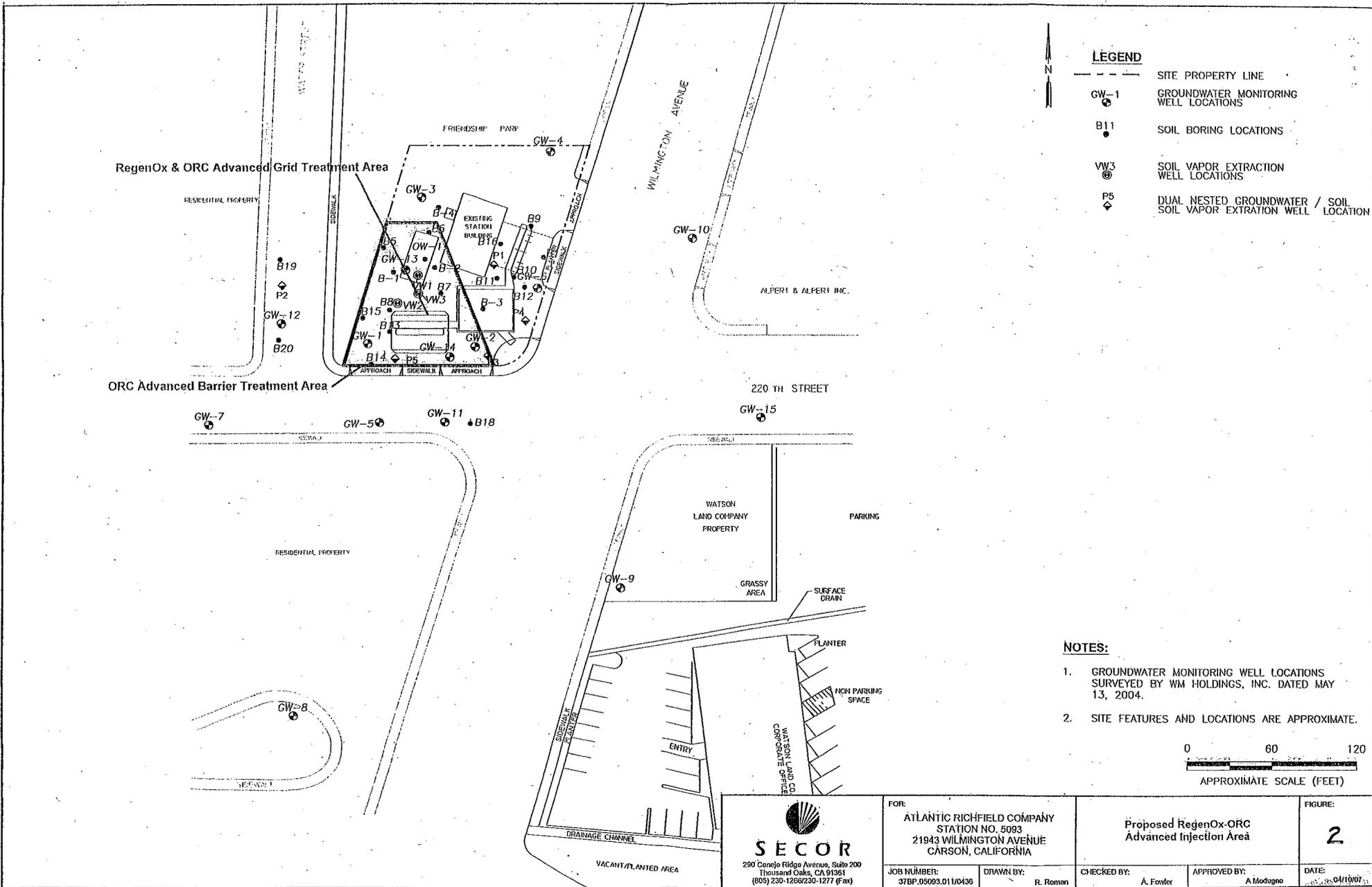
VI. PUBLIC DOCUMENTS

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

Ordered by: Samuel Unger
Samuel Unger
Interim Executive Officer

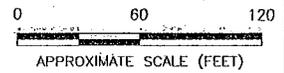
Date: July 29, 2010





- LEGEND**
- SITE PROPERTY LINE
 - GW-1 GROUNDWATER MONITORING WELL LOCATIONS
 - B11 SOIL BORING LOCATIONS
 - VW3 SOIL VAPOR EXTRACTION WELL LOCATIONS
 - P5 DUAL NESTED GROUNDWATER / SOIL VAPOR EXTRACTION WELL LOCATION

- NOTES:**
1. GROUNDWATER MONITORING WELL LOCATIONS SURVEYED BY WM HOLDINGS, INC. DATED MAY 13, 2004.
 2. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.



<p>290 Conejo Ridge Avenue, Suite 200 Thousand Oaks, CA 91321 (805) 230-1266/230-1277 (Fax)</p>	FOR: ATLANTIC RICHFIELD COMPANY STATION NO. 5093 21943 WILMINGTON AVENUE CARSON, CALIFORNIA		Proposed RegenOx-ORC Advanced Injection Area		FIGURE: 2
	JOB NUMBER: 37BP.05093.011/0436	DRAWN BY: R. Roman	CHECKED BY: A. Fowler	APPROVED BY: A. Modugno	DATE: 04/10/07