California Regional Water Quality Control Board
Los Angeles Region

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Phone (213) 576-6600 FAX (213) 576-6640
http://www.waterboards.ca.gov/losangeles

Linda S. Adams
Acting Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

April 15, 2011

Deborah Pryor
Shell Oil Products
P.O. Box 6249
Carson, CA 90749-6249

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)
FORMER SHELL STATION (Priority D-1 Site)
918 NORTH SOTO STREET, BOYLE HEIGHTS, CA (Case No. 900330152)

Dear Ms. Pryor:

We have completed our review of your application for coverage under the General Waste Discharge Requirements to inject ORC into the groundwater to supplement active remediation of the groundwater contamination plume beneath the subject site (Site). The Site is currently an active Pronto Service Station with three 10,000-gallon and one 550-gallon waste oil USTs, in an area of mixed residential and commercial properties.

The Site is located within the Los Angeles Basin. According to boring logs and cross section maps, the subsurface lithology of the Site consists of silty clay and clayey silt to a depth of approximately 35 feet below ground surface (bgs).

A total of twenty two groundwater monitoring wells (BH-1, BH-2A, BH-3A, BH-7, BH-7A, BH-11, BH-12, BH-13, BH-14E, BH-14-W, BH-15S, BH-15D, BH-16S, BH-16D, BH-17S, BH-17D, BH-19, BH-20S, BH-20D, BH-22, BH-23 and BH-25) have been installed related to the Site. Groundwater monitoring has been conducted since August 1993.

On March 2, 2010, groundwater sampling detected concentrations of 76,000 µg/L TPHg, 46 µg/L MTBE, 18,000 µg/L TBA, 1,300 µg/L DIPE in shallow groundwater zone, and 56 µg/L benzene, in the lower groundwater zone beneath the site. Depth to groundwater was measured at approximately 8 feet bgs in the shallow groundwater zone and 20 feet bgs in the lower groundwater zone. Groundwater flow direction is generally toward the northwest in the shallow zone and toward the west in the lower zone.

In a workplan (Workplan) dated September 9, 2010, your previous consultant, Delta, proposed to install seven oxygen release compound (ORC) injection points (ORC-1 through ORC-7) to inject ORC into the groundwater for a pilot test to enhance active soil and groundwater remediation beneath the Site. On October 11, 2010, Regional Board staff approved the Workplan. On February 2, 2011, your current consultant, URS submitted to this Regional

Board an application for a waste discharge requirements (WDR) for the proposed ORC injection.

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-9678, and Standard Provisions.

The WDRs issued shall not be terminated until Regional Board staff determines the WDRs 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-9678 to assure 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.

To avoid paying future annual fees, please submit a 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.

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

If you have any questions on Order No. R4-2007-0019, please contact Dr. 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,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

Enclosures:

1. Board Order No. R4-2007-0019
2. Monitoring and Reporting Program No. CI-9678
3. Standard Provisions

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-9678

FOR

FORMER SHELL STATION

ENROLLMENT UNDER REGIONAL BOARD

ORDER NO. R4-2007-0019
SERIES NO. 156

I. REPORTING REQUIREMENTS

A. Former Shell Station (Pronto Service Station) (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:

Reporting Period	Sampling Period	Report Due Date
January – June	April - June	July 15th
July – December	October - December	January 15th

The first monitoring report under this monitoring program is due by July 15, 2011.

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. 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 monitoring reports shall contain the following information regarding the injection activities. If there is no injection during any reporting period, the report shall so state:

1. Location map showing injection points.

2. Written summary defining:
   - Depth of injection points;
   - Quantity of ORC injected at each injection point.

3. Monthly visual inspection at each injection well shall be conducted to evaluate the well casing integrity for a period of three months after each injection. The quarterly report shall include a summary of the visual inspection.

4. To avoid groundwater monitoring network reduction, data bias, and well screen clogging or alteration, no groundwater monitoring wells shall be used as injection points during the proposed ORC injection. Separate injection points/wells must be installed at the Site for the proposed ORC injection.

III. GROUNDWATER MONITORING PROGRAM

A groundwater-monitoring program shall be designed to detect and evaluate impacts associated with the injection activities. The monitoring well network must include BH-12 and BH-19 as a background wells; BH-2A and BH-7A as source wells; and BH-11, BH-14W and BH-14E 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 baseline sampling from the downgradient well (BH-19) one or two weeks prior to the proposed ORC injection and regular sampling with the required frequencies from all the monitoring wells in the monitoring network for the following constituents:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
pH	PH units	Grab	Semi-annual[1]
Temperature	^{0}F	grab	Semi-annual[1]
Oxidation-reduction potential	Milivolts	grab	Semi-annual[1]
Specific conductivity	µmhos/cm	grab	Semi-annual[1]
Dissolved Ferrous iron	µg/L	grab	Semi-annual[1]
Dissolved Oxygen	µg/L	grab	Semi-annual[1]

MTBE, Tert-Butyl Alcohol (TBA), Di-isopropyl Ether (DIPE), Ethyl-t-Butyl Ether (ETBE), Tert-Amyl-Methyl Ether (TAME)	µg/L	grab	Semi-annual[1]
Ethanol Formaldehyde Acetone	µg/L	grab	Semi-annual[1]
Total Petroleum Hydrocarbons as gasoline (TPHg) and as diesel (TPHd)	µg/L	grab	Semi-annual[1]
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	µg/L	grab	Semi-annual[1]
Total organic carbon	µg/L	grab	Semi-annual[1]
Total dissolved solids, Arsenic, Boron, Chloride, Bromide, Sulfate, Lead, Nickel, Cadmium, Manganese	mg/L	grab	Semi-annual[1]
Total Chromium and Chromium six[2]	Mg/L	grab	Semi-annual[1]

[1] One week before injection and semi-annual thereafter.

[2] The Discharger is required to monitor for total chromium and chromium six in the baseline, semi-annually. 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)

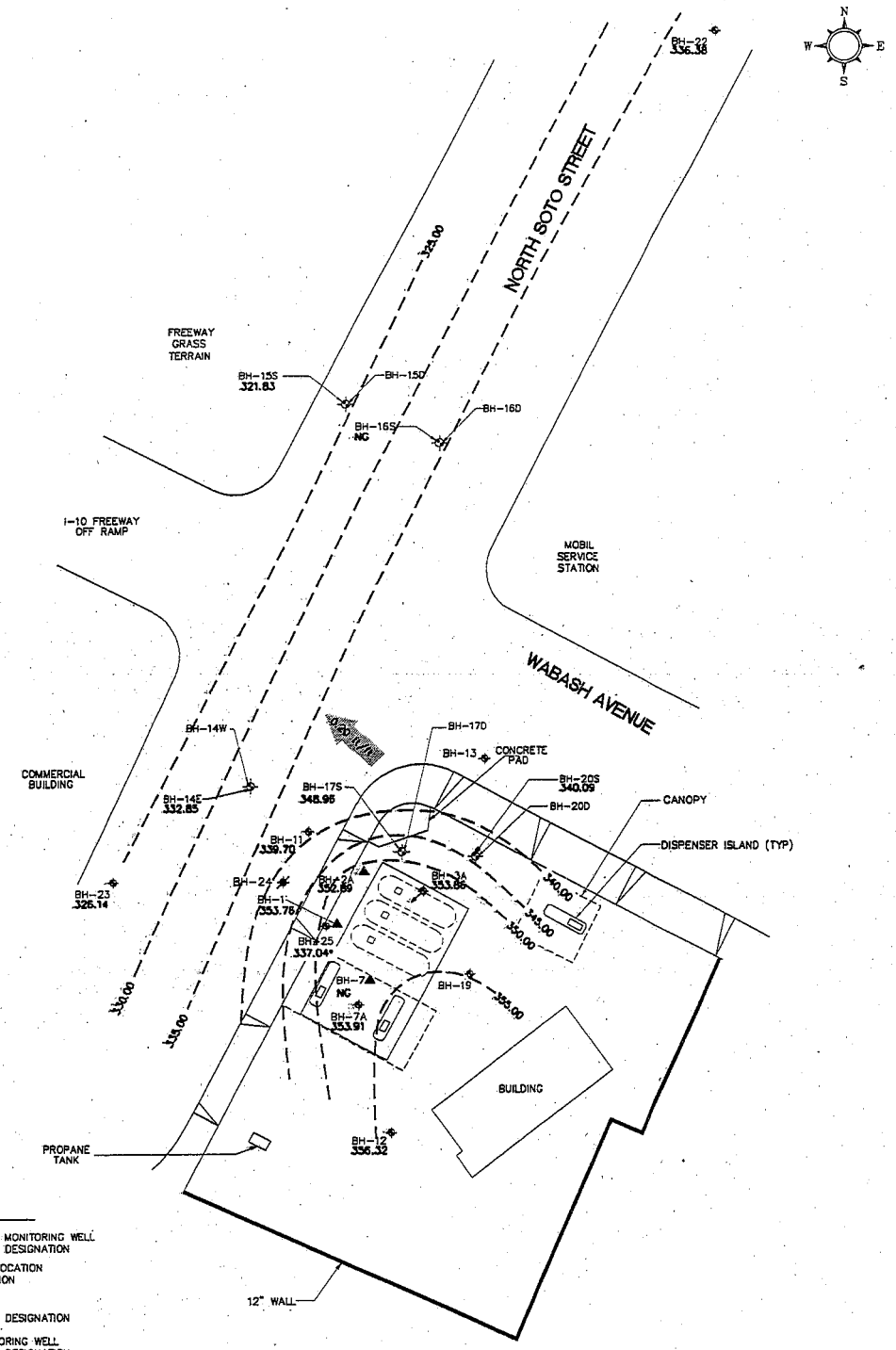
_____(Title)"

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: Samuel Unger Date: April 15, 2011
Samuel Unger
Executive Officer

0 20 40
SCALE IN FEET

DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
J.F.F. 9/15/2010			SCA918S01D



LEGEND

BH-11	GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
BH-1	VAPOR WELL LOCATION AND DESIGNATION
BH-3A	SLANT WELL LOCATION AND DESIGNATION
BH-14W	NESTED MONITORING WELL LOCATION AND DESIGNATION
BH-24	CANCELLED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
353.21	GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (Ft/MSL)
350.00	GROUNDWATER CONTOUR IN FEET ABOVE MEAN SEA LEVEL (Ft/MSL)
	CONTOUR INTERVAL=5.00 FT
0.20 ft/ft	APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)
NG	NOT GAUGED
DRY	DRY WELL
*	ANOMALOUS DATA NOT USED IN CONTOURING
**	INSUFFICIENT WATER, DATA NOT USED IN CONTOURING

NOTES

1. WELLS BH-1, BH-2A, BH-3A, BH-7A, BH-11, BH-12, BH-14E, BH-15S, BH-16S, BH-17S, BH-20S, BH-22, BH-23, AND BH-25 ARE SHALLOW WELLS
2. WELLS BH-13, BH-14W, BH-15D, BH-16D, BH-17D, BH-19, AND BH-20D ARE DEEP WELLS.

DELTA CONSULTANTS

SHELL OIL PRODUCTS US
FORMER SHELL SERVICE STATION
LOS ANGELES, CALIFORNIA

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP
SHALLOW ZONE
7/22/2010
918 NORTH SOTO STREET
LOS ANGELES, CALIFORNIA