

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

May 17, 2013

Mr. Greg Grover
Circle K Stores Inc.
255 East Rincon, Suite 100
Corona, CA 92879

Certified Mail with Return Receipt
7001 2510 0000 4661 2636

**UNDERGROUND STORAGE TANK PROGRAM—DIRECTIVE TO TAKE CORRECTIVE ACTION AND GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER CLEANUP AT PETROLEUM HYDROCARBON FUEL, VOLATILE ORGANIC COMPOUND AND/OR HEXAVALENT CHROMIUM IMPACTED SITES
MOBIL SERVICE STATION/CIRCLE K STATION #2211184
20802 SOUTH VERMONT AVENUE, TORRANCE, (FILE NO. R-05290; ORDER NO. R4-2007-0019-222; CI NO. 9939)**

Dear Mr. Grover:

We have received the letter dated April 22, 2013, from your consultant, URS containing the application for the coverage of the General Waste Discharge Requirements (R4-2007-0019-222) for your proposed ozone injection operations.

The subject site is an active Mobil gasoline retail station with two 12,000-gallon gasoline underground storage tanks (USTs), one 10,000-gallon gasoline UST, one 10,000-gallon diesel UST, and associated fuel dispensers and piping.

There are currently ten groundwater monitoring wells: MW-1R, MW-2, MW-3R, and MW-4 through MW-10 that are monitored semiannually.

Remedial actions at the site included free product removal from 1998 to present, soil vapor extraction operation from June to September 2005, soil excavation and disposal in 2009, Cool-Ox™ injection in April 2009, and five mobile dual phase extraction events between December 2010 and May 2011. The groundwater data of the second semi-annual monitoring event in 2012 indicated TPHg was detected up to 26,000 µg/L, TPHd 18,000 µg/L, benzene 2,200 µg/L, MTBE 290 µg/L, and TBA 99,000 µg/L. Free product was not detected in any of the monitoring wells.

In the "Well Installation and Ozone Pilot Test Workplan," dated December 5, 2012 (Workplan), the Discharger selected ozone sparging to be implemented in a pilot test to assess its effectiveness to remediate hydrocarbon impacted soil and groundwater at the site. Ozone sparging is expected to be able to remediate the dissolved-phase concentrations of TPHg, benzene, MTBE and TBA currently present in the groundwater as well as hydrocarbon impacted soil currently submerged below the current groundwater levels.

Staff concurs with implementing the Workplan with the condition that groundwater monitoring wells shall not be used for chemical injection purposes. Separate injection points/probes must be installed at the site for the proposed injections.

MARIA MEHRANIAN, CHAIR | SAMUEL UNGER, EXECUTIVE OFFICER

320 West 4th St., Suite 200, Los Angeles, CA 90013 | www.waterboards.ca.gov/losangeles

Mr. Greg Grover
Mobil/Circle K Station

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We also completed review of your application and 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 (General WDRs)," adopted by the Los Angeles Regional Water Quality Control Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of the General WDRs R4-2007-0019 and Monitoring and Reporting Program No. CI-9939. These Waste Discharge Requirements shall not be terminated without Regional Board UST staff's prior approval.

When submitting technical monitoring reports to the Regional Board per these requirements, please include a reference to Compliance File No. CI-9939, which will 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.

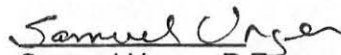
In accordance with regulations adopted by the State Board in September 2004 regarding electronic submittal of information, UST monitoring reports have been electronically submitted to the State Board GeoTracker system under the UST Global ID T0603704674. To comply with the Monitoring and Reporting Program under this WDRs, You shall upload the WDRs monitoring reports to the Geotracker under the two Global ID T0603704674 (continuing) and WDR100001487 (new). For more information regarding the new Global ID under WDRs, please see ESI training video available at:

<https://waterboards.webex.com/waterboards/ldr.php?AT=pb&SP=MC&rID=44145287&rKey=7dad4352c990334b>.

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 of 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 Mr. Arman Toumari at (213) 576-6708 or atoumari@waterboards.ca.gov for issues regarding underground storage tanks, or Dr. Eric Wu at (213) 576-6683 or ewu@waterboards.ca.gov for issues regarding the WDRs.

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosures:

1. General WDRs Order No. R4-2007-0019
2. Monitoring and Reporting Program No. CI-9939

Mr. Greg Grover
Mobil/Circle K Station

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May 17, 2013

cc: Kathy Jundt, SWRCB, Underground Tank Cleanup Fund
Phuong Ly, Water Replenishment Distruct of Southern California
Ken Lew, Torrance Fire Department
Jennifer Nobui, URS

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-9939
FOR
MOBIL SERVICE STATION/CIRCLE K STATION #2211184
20802 SOUTH VERMONT AVENUE, TORRANCE
(OZONE INJECTION FOR GROUNDWATER CLEANUP)
(ORDER NO. R4-2007-0019, SERIES NO. 222)

I. REPORTING REQUIREMENTS

- A. Circle K Stores Inc. (hereinafter Discharger) shall implement this monitoring program on the effective date of this Monitoring and Reporting Program (MRP). The first monitoring report under this program, for the period from the effective date of this MRP to June 30, 2013, shall be received at the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) by July 15, 2013. 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
July – December	January 15

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.

- B. Laboratory analyses—all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health 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.
- C. The method limits (MLs) employed for analytical 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 from the Regional Board.
- D. Groundwater samples must be analyzed within allowable holding time limits as specified in 40 Code of Federal Regulation Part 136. All QA/QC samples must be run on the dates when samples are actually analyzed. The Discharger shall make available for inspection and/or submit the QA/QC documentation upon request from the Regional Board.
- E. Each monitoring report must affirm in writing that "All analyses are conducted at a laboratory certified for such analyses by the California Department of Public

Health and in accordance with current United States Environmental Protection Agency guideline procedures, or as specified in this MRP." Proper chain of custody procedure must be followed and a copy of the completed chain of custody form shall be submitted with the report.

- F. Each monitoring report shall contain a separate section entitled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that are needed to bring the discharge into full compliance with Waste Discharge Requirements (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.
- G. 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.
- H. If the Discharger performs analyses on groundwater samples more frequently than required by this MRP using approved analytical methods, the results of those analyses shall be included in the report.
- I. 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.
- J. The Discharger should not implement any changes to the MRP prior to receiving Executive Officer's written approval.
- K. In accordance with regulations adopted by the State Board in September 2004 regarding electronic submittal of information, Underground Storage Tank Program (UST) monitoring reports have been electronically submitted to the State Board GeoTracker system under the UST Global ID T0603704674. To comply with the MRP under this WDRs, the Discharger shall upload the WDRs monitoring reports to the Geotracker under the two Global ID T0603704674 (continuing) and WDR100001487 (new).

II. REGENOX INJECTION MONITORING REQUIREMENTS

The reports shall contain the following information regarding injection activities:

1. Written and tabular summary defining the quantity of ozone injected and a summary describing the days on which the injection system was in operation.
2. Location map showing locations for ozone injection. One injection location within the treatment area is currently proposed (see Figure 2). Additional locations are permitted with Regional Board staff concurrence. Additional injection locations shall be reviewed and approved by the Regional Board. Please note groundwater wells shall not be used as

injection points to avoid reduction of groundwater monitoring network, data bias, screening clogging and alteration.

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall conduct groundwater monitoring at the site. Groundwater samples shall be collected from one up-gradient well, MW-3R, and three down-gradient monitoring wells (MW-4, MW-7 and MW-10) on a semi-annual basis (see Figure 3 for groundwater flow direction and Figure 5 for representative TPHg plume in groundwater). Groundwater shall be monitored for the duration of the MRP in accordance with the following discharge monitoring program:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS ¹
Total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd)	µg/L	Grab	• Semi-Annually
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	µg/L	Grab	• Semi-Annually
MTBE, TBA, TAME, DIPE, ETBE, Naphthalene	µg/L	Grab	• Semi-Annually
Ethanol Formaldehyde Acetone	µg/L	Grab	• Semi-Annually
Total dissolved solids, Arsenic, Boron, Chloride, Bromide, Sulfate, Lead, Nickel, Cadmium, Manganese	mg/L	Grab	• Semi-Annually
Oxidation-reduction potential	milivolts	Grab	• Semi-Annually
Dissolved Oxygen	µg/L	Grab	• Semi-Annually
Dissolved ferrous iron	µg/L	Grab	• Semi-Annually
Total Chromium and hexavalent chromium ²	µg/L	Grab	• Semi-Annually
pH	pH units	Grab	• Semi-Annually
Temperature	⁰ F/ ⁰ C	Grab	• Semi-Annually
Groundwater Elevation	Feet, mean sea level, and below ground surface	In situ	• Semi-Annually

¹. One week before injection and semi-annually thereafter.

². The Discharger is required to monitor for total chromium and hexavalent chromium in the baseline, second and fourth semi-annually 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 a minimum, the following:

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

IV. MONITORING FREQUENCIES

Monitoring frequencies may be adjusted to a less frequent basis or parameters dropped by the Executive Officer if the Discharger makes a request and the Executive Officer determines that the request is adequately supported 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 the Regional Board.

Ordered by: Samuel Unger
Samuel Unger, P.E.
Executive Officer

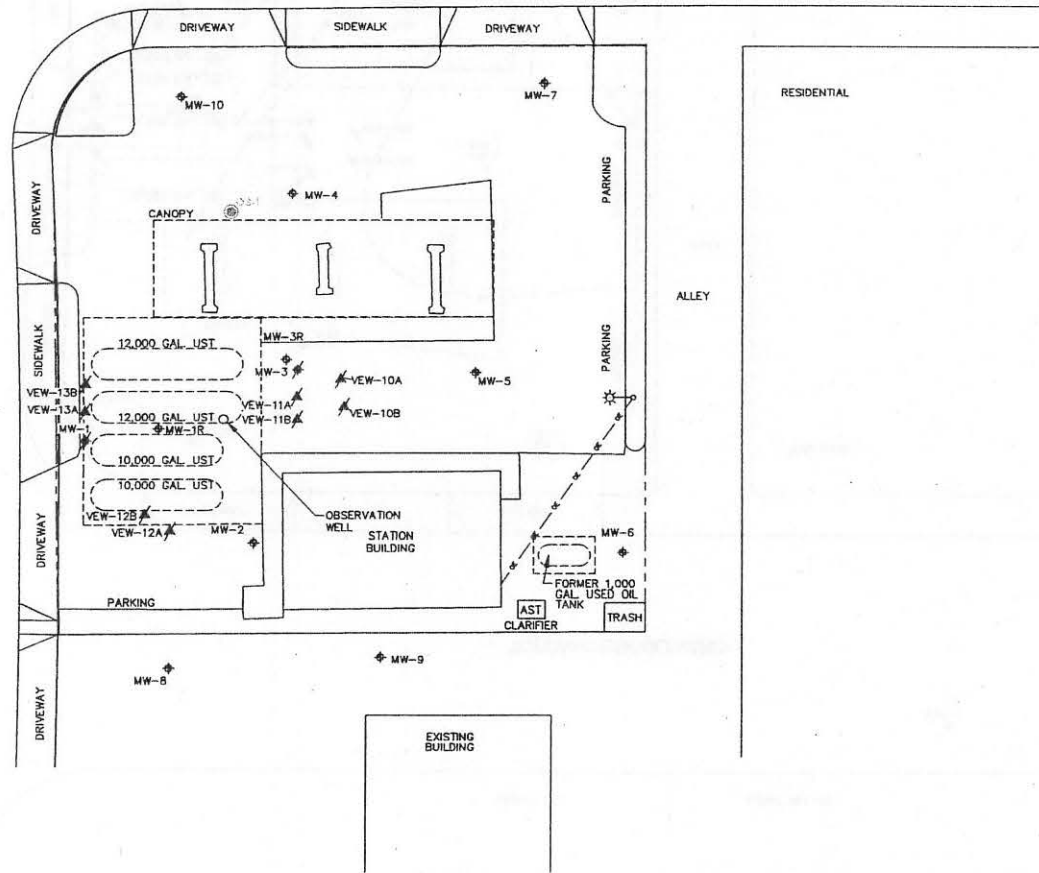
Date: May 17, 2013

SOUTH VERMONT AVENUE

VACANT LOT

ALPINE VILLAGE

TORRANCE BOULEVARD



LEGEND

- PROPERTY LINE
- MW-1R ◆ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-1 ◆ ABANDONED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-11 ◆ PROPOSED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- VEW-13A ◆ ABANDONED VAPOR EXTRACTION WELL
- ◆ LIGHT POLE
- OVERHEAD ELECTRIC LINE
- OS-1 @ PROPOSED OZONE INJECTION WELL

0 15 30
SCALE IN FEET

URS

SITE MAP WITH CURRENT PROPOSED OZONE INJECTION WELL LOCATION

MOBILE SERVICE STATION
SAP No. 2211184
20802 SOUTH VERMONT AVENUE
TORRANCE, CALIFORNIA

FIGURE 2

SOUTH VERMONT AVENUE

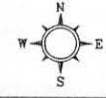
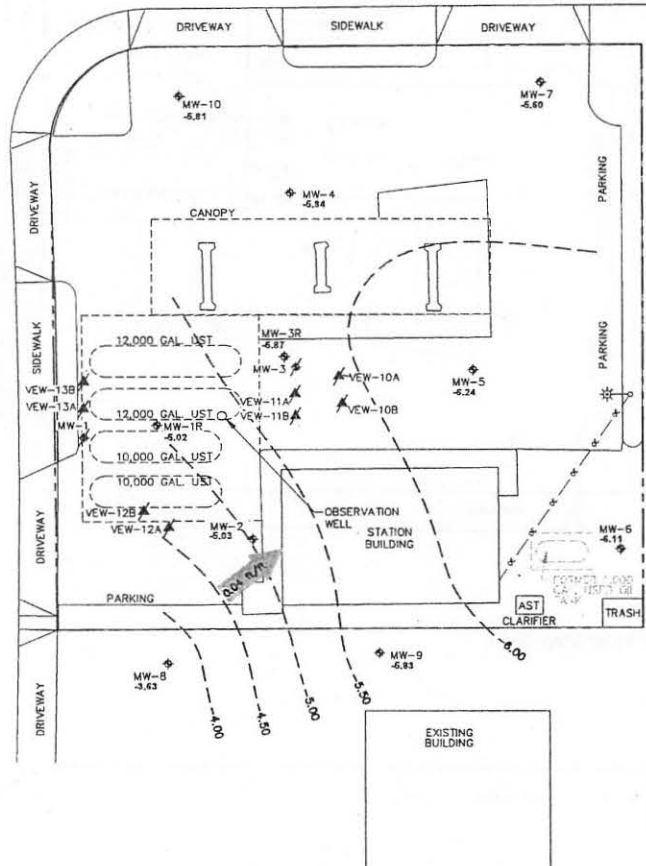
VACANT LOT

ALPINE VILLAGE

TORRANCE BOULEVARD

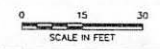
RESIDENTIAL

ALLEY



LEGEND

- PROPERTY LINE
- MW-1R ◆ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-1 ◆ ABANDONED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-11 ◆ PROPOSED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- VEW-13A ◆ ABANDONED VAPOR EXTRACTION WELL
- ☼ LIGHT POLE
- ⊥— OVERHEAD ELECTRIC LINE
- 5.60 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (Ft./MSL)
- 6.00 GROUNDWATER CONTOUR IN FEET ABOVE MEAN SEA LEVEL (Ft./MSL)
CONTOUR INTERVAL=0.50 FEET
- ← 0.04 ft/h APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/h)



URS	
GROUNDWATER ELEVATION CONTOUR MAP 11/08/2012	
MOBIL SERVICE STATION SAP No. 2211184 20802 SOUTH VERMONT AVENUE TORRANCE, CALIFORNIA	FIGURE 3

SOUTH VERMONT AVENUE

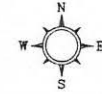
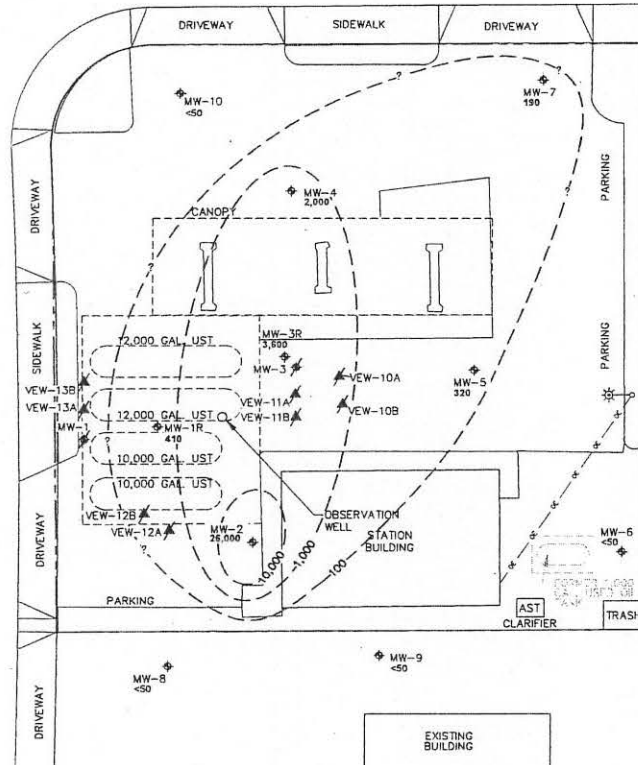
VACANT LOT

ALPINE VILLAGE

TORRANCE BOULEVARD

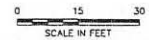
RESIDENTIAL

ALLEY



LEGEND

- PROPERTY LINE
- MW-1R ◆ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-1 ◆ ABANDONED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-11 ◆ PROPOSED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- VEW-13A ◆ ABANDONED VAPOR EXTRACTION WELL
- ◆ LIGHT POLE
- x— OVERHEAD ELECTRIC LINE
- 190 TPH-g CONCENTRATION IN GROUNDWATER IN MICROGRAMS PER LITER ($\mu\text{g/L}$)
- 100 --- LINE OF EQUAL TPH-g CONCENTRATION
- TPH-g TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- $\mu\text{g/L}$ MICROGRAMS PER LITER
- ND< NOT DETECTED ABOVE LIMIT NOTED



URS

TPH-g ISOCONCENTRATION MAP
11/08/2012

MOBIL SERVICE STATION
SAP No. 2211184
20802 SOUTH VERMONT AVENUE
TORRANCE, CALIFORNIA

FIGURE 5