



California Regional Water Quality Control Board

Los Angeles Region



Linda S. Adams
Agency Secretary

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

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Arnold Schwarzenegger
Governor

October 5, 2009

Ms. Mary Elaine Valenzuela
Office of Environmental Health and Safety
Los Angeles Unified School District
333 South Beaudry Avenue, 20th Floor
Los Angeles, CA 90017

**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)
SOUTH REGION ELEMENTARY SCHOOL #3 (A-2 SITE) - 7301 SOUTH ATLANTIC
AVENUE, CUDAHY
(SERIES NO. 102; CI NO. 9539 (UST FILE NO. R-03600))**

Dear Ms. Valenzuela:

We have completed our review of your application for coverage under the General Waste Discharge Requirements to inject ORC at the subject site (the Site). ORC utilizes magnesium peroxide to break down petroleum hydrocarbon constituents present in subsurface soil and groundwater at the site.

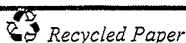
The subject property (Site) is located in the City of Cudahy, along the west side of South Atlantic Avenue just south of Florence Avenue. About 150 feet to the northeast, there is an Atlantic Richfield Company (Arco) Station (Station No. 3043, Regional Board UST File No. I-00474).

Okeh Caterers (Okeh) had formerly occupied and operated at the Site between 1950's and October 2007, when Okeh sold the property to the Los Angeles Unified School District (LAUSD). LAUSD assumed the environmental liabilities for the Site since October 2007. Currently, LAUSD is in the process to redevelop the Site into an elementary school, and thereby to conduct necessary corrective actions under the joint jurisdiction of the Regional Board and Department of Toxics Control Substance (DTSC).

Okeh maintained three underground storage tanks (USTs), namely two USTs for gasoline with unknown capacity and one 280-gallon waste oil UST. All these USTs were located to the east of the former auto/truck repair building located approximately in the center of the Site. Reportedly, two gasoline USTs were removed from the Site in 1983, and the 208-gallon waste oil UST was removed from the Site in 1998.

Groundwater monitoring data since March 2005 indicated that elevated concentrations of fuel constituents were detected in groundwater beneath site. For example, maximum concentrations of 178,000 $\mu\text{g/L}$ TPHg, 36,100 $\mu\text{g/L}$ benzene, and 1,850 $\mu\text{g/L}$ MTBE were detected in

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groundwater beneath the Site. In addition, groundwater analytical data confirmed that releases from the former USTs have impacted the groundwater beneath the Site.

The Site is located within the West Coast Basin. During the monitoring event in May 2009, groundwater was measured at approximately 17 feet bgs, and the groundwater flow direction was to the south.

In a directive letter dated February 26, 2009, staff required the LAUSD to submit a RAP to evaluate and propose viable remedial alternative(s) to mitigate the groundwater plume resulted from the unauthorized releases associated with the former USTs at the Site. On May 29, 2009, LAUSD submitted a remedial action plan (RAP) and proposed to inject oxygen release compounds (ORC) including a mixture of magnesium peroxide, magnesium oxide, and magnesium hydroxide within the saturated zone around the former UST area. The RAP proposed a total of 42 injection points in a grid of 8 to 10 feet to be installed over an area of approximately 50 by 60 feet.

On September 24, 2009, Regional Board staff approved the RAP.

Staff has determined that the 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 State Water Resources Control Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2007-0019 and Monitoring and Reporting Program No. CI-9539 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 (September 30, 2009) 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-9539 to assure that the reports are directed to the appropriate 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.

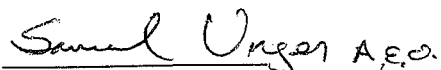
Ms. Mary Elaine Valenzuela
South Region Elementary School #3

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October 5, 2009

If you have any questions, please contact Ms. Rebecca Chou at (213) 620-6156. Questions regarding the underground storage tank issues should be forwarded to Arman Toumari at (213) 576-6708.

Sincerely,



Tracy J. Egoscue
Executive Officer

Enclosures: 1. Board Order No. R4-2007-0017
2. Monitoring and Reporting Program No. CI-9539

cc: Hari Patel, SWRCB, Underground Storage Tank Cleanup Fund
Nancy Matsumoto, Water Replenishment District of Southern California
Tim Smith, Los Angeles County Department of Public Works
Stephanie Lewis, DTSC
Alexis M. Bahou, URS

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STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
MONITORING AND REPORTING PROGRAM NO. CI-9539
FOR
SOUTH REGION ELEMENTARY SCHOOL #3
ENROLLMENT UNDER REGIONAL BOARD
ORDER NO. R4-2007-0019
SERIES NO. 102

I. REPORTING REQUIREMENTS

- A. LAUSD (hereinafter Discharger) shall implement this monitoring program on the effective date of this enrollment (October 5, 2009) under Regional Board Order No. R4-2007-0019. The first monitoring report under this Program is due by **January 15, 2010**.

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

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

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. By March 1st of each year, 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 (WDRs).
- 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.
- 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. INJECTION MONITORING REQUIREMENTS

Injection of ORC:

The quarterly 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; and
 - Total amount of ORC injected at site.
3. Quarterly 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 for ozone during the pilot or full scale remediation.

III. GROUNDWATER MONITORING PROGRAM

A groundwater-monitoring program shall be designed to detect and evaluate impacts associated with the injection activities. Since all monitoring wells at the site have been abandoned, a workplan to re-install these wells must be submitted to this Regional Board for approval before the proposed injection can take place. The monitoring network shall adequately delineate the plume and the extent of the cleanup activity as specified in Regional Board's remedial action plan approval letter dated September 24, 2009. The monitoring program shall include up-gradient, down-gradient, and the source wells. Since all existing onsite wells have been abandoned due to construction, you must submit a map showing the location of all proposed replacement wells and get approval from the Executive Officer prior to injection. A baseline monitoring and sampling shall be conducted prior to the proposed ORC injections. 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 Officer prior to their use. The Discharger shall conduct baseline sampling one or two weeks prior to ORC injection 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	⁰ 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)	mg/L	grab	Semi-annually ³
Total Chromium	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 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)"

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 Acosta
Tracy J. Egošcuc
Executive Officer

Date: October 5, 2009