



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

December 30, 2010

Ms. Holly Quasem
ConocoPhillips Company
3900 Kilroy Airport Way, Suite 200
Long Beach, CA 90806

GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER CLEANUP AT PETROLEUM HYDROCARBON FUEL, VOLATILE ORGANIC COMPOUND AND/OR HEXAVALENT CHROMIUM IMPACTED SITES —76 STATION 4330, 4870 BELLFLOWER BOULEVARD, LAKEWOOD (ORDER NO. R4-2007-0019-148; CI NO. 8913)

Dear Ms. Quasem:

We have received the letter dated April 1, 2010, from your consultant, Environ Strategy Consultants, Inc. containing the application for extension of coverage of the General Waste Discharge Requirements (General WDRs) for your ozone injection and vapor extraction operations.

On July 6, 2005, the Los Angeles Regional Board issued the General WDRs, R4-2005-0030, and Compliance and Monitoring Program CI No. 8913 for ozone injection proposed in "Feasibility Testing Report and Remediation Action Plan" dated February 13, 2004.

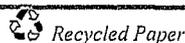
On November 4, 2009, ozone injection was initiated at the site. Ozone has been injected at a rate of 26 grams per hour into 10 injection points, CS-1 through CS-10 (Figure 1), concurrently with vapor extraction operation.

The General WDRs R4-2005-0030 expired on May 4, 2010. As a result, your consultant, Environ Strategy Consultants, Inc., submitted on your behalf on April 1, 2010, the application for extension of coverage for its ozone injection and vapor extraction operations.

We have completed our review of your requests 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, which replaces your previous General WDRs R4-2005-0030, and Revised Monitoring and Reporting Program No. CI-8913 and Standard Provisions. This Waste

California Environmental Protection Agency



Discharge Requirements shall not be terminated without the regulatory oversight agency's prior approval.

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.

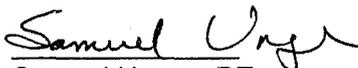
When submitting monitoring reports to the Regional Board per these requirements, please include a reference to Compliance File No. CI-8913, which will assure that the reports are directed to the appropriate file and staff. Do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

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.

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, please contact Dr. Rebecca Chou at (213) 620-6156 or rchou@waterboards.ca.gov for WDRs administration matters, or Mr. Gregg Kwey at (213) 576-6702 or gkwey@waterboards.ca.gov for technical matters.

Sincerely,

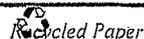


Samuel Unger, PE
Executive Officer

Enclosures: Revised Monitoring and Reporting Program No. CI-8913

cc: Mr. Dane Nygaard, Environ Strategy Consultants, Inc.

California Environmental Protection Agency

 Recycled Paper

Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

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

REVISED MONITORING AND REPORTING PROGRAM NO. CI-8913

FOR

CONOCOPHILLIPS COMPANY
76 STATION 4330
4870 BELLFLOWER BOULEVARD, LAKEWOOD

(OXYGEN RELEASE COMPOUNDS INJECTION FOR GROUNDWATER CLEANUP)
(ORDER NO. R4-2007-0019, SERIES NO. 148)

I. REPORTING REQUIREMENTS

- A. ConocoPhillips 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, for the period from the effective date of this program to June 2011, shall be received at the Regional Board by July 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
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 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.
- C. 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.

- D. 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.
- E. 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.
- F. 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.
- 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 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.
- 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 Monitoring and Reporting Program prior to receiving Executive Officer's written approval.

II. OZONE INJECTION MONITORING REQUIREMENTS

The Semi-Annually reports shall contain the following information regarding injection activities:

1. Location map showing locations used for the ozone injection. 10 locations (CS-1 through -10 as identified in Figure 1) within the treatment area are currently used as injection points. Groundwater wells shall not be used as re-injection points to avoid reduction of groundwater monitoring network, data bias. Additional injection points should be reviewed and approved by the regional board.
2. Written and tabular summary defining the quantity of ozone injected and a summary describing the days on which the injection system was in operation.

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall conduct groundwater monitoring at the site. Groundwater samples shall be collected from 4 up-gradient monitoring wells B-6, -7, -10 and -11; 7 treatment area monitoring wells B-1, -2, -3, -4, -5, -9 and -13; and 4 down-gradient monitoring wells B-8, -16, -17 and -18 on a semi-annual basis to monitor the effectiveness of the in-situ groundwater remediation (refer Figure 2 for groundwater flow direction, Figure 4 for representative groundwater benzene plume). Groundwater shall be monitored for the duration of the remediation in accordance with the following discharge monitoring program:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd)	µg/L	Grab	• Semi-Annually ¹
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	µg/L	Grab	• Semi-Annually ¹
Methyl tertiary butyl ether (MTBE), Tertiary butyl alcohol (TBA), Tertiary amyl methyl ether (TAME), Di-isopropyl ether (DIPE), ether (ETBE)	µg/L	Grab	• Semi-Annually ¹
Ethanol Formaldehyde Acetone	µg/L	Grab	• Semi-Annually ¹
Total dissolved solids, Arsenic, Boron, Chloride, Bromide, Sulfate, Lead, Nickel, Cadmium, Manganese	mg/L	Grab	• Semi-Annually ¹

Revised Monitoring and Reporting Program CI-8913

Oxidation-reduction potential	millivolts	Grab	• Semi-Annually ¹
Dissolved Oxygen	µg/L	Grab	• Semi-Annually ¹
Dissolved ferrous iron	µg/L	Grab	• Semi-Annually ¹
Total Chromium and chromium six ²	µg/L	Grab	• Semi-Annually ¹
PH	pH units	Grab	• Semi-Annually ¹
Temperature	⁰ F/ ⁰ C	Grab	• Semi-Annually ¹
Groundwater Elevation	Feet, mean sea level and below ground surface	In situ	• Semi-Annually ¹

¹ One week before injection and Semi-Annually thereafter

² The Discharger is required to monitor for total chromium and chromium six 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-Annually 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 office of the California Regional Water Quality Control Board, Los Angeles Region.

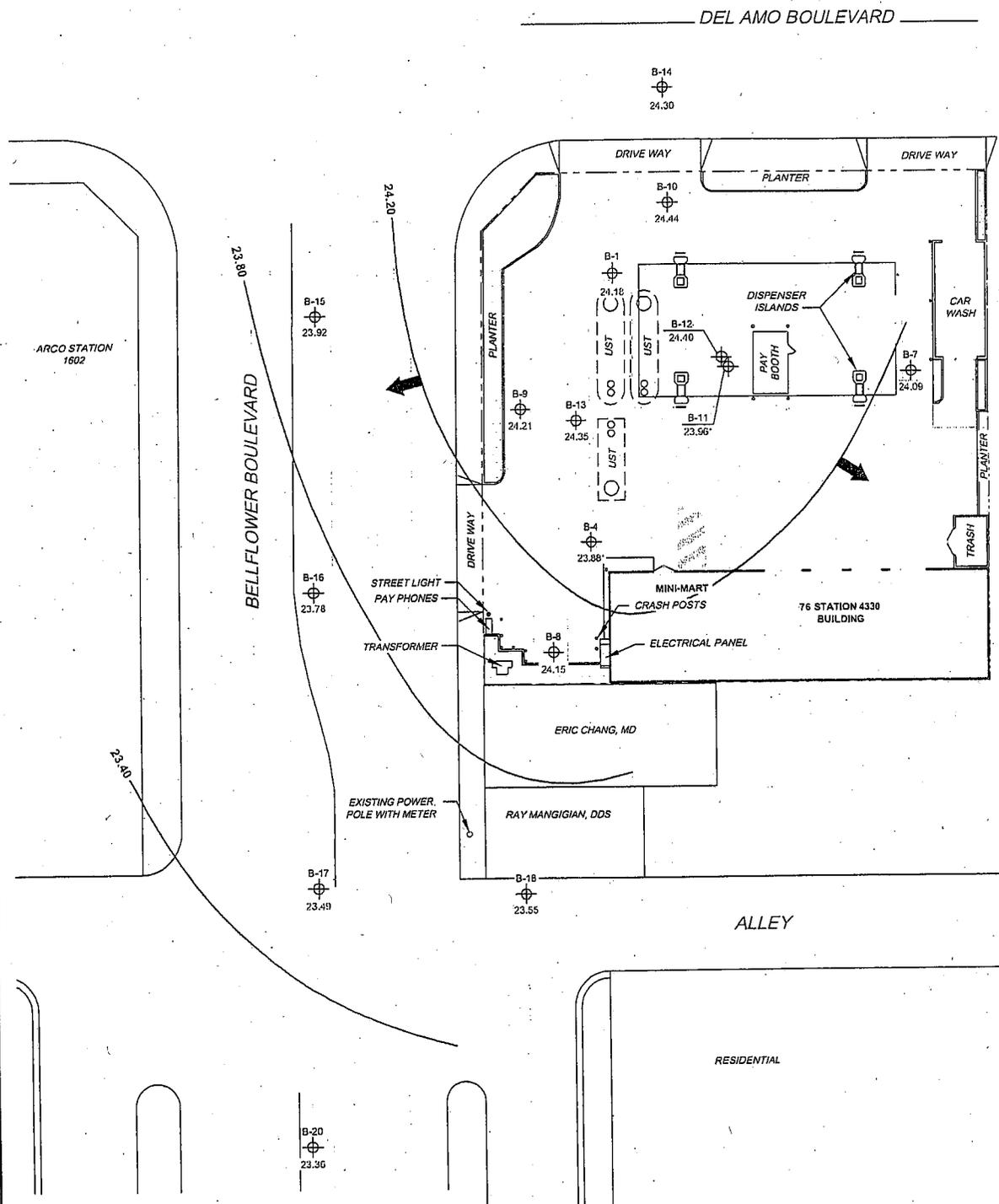
Ordered by:

Samuel Unger
Samuel Unger, PE
Executive Officer

Date: December 30, 2010

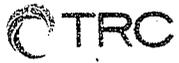
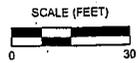
LEGEND

- B-20  Monitoring Well with Groundwater Elevation (feet)
- 24.20  Groundwater Elevation Contour
-  General Direction of Groundwater Flow



NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. * = not included in groundwater contour interpretation. UST = underground storage tank.



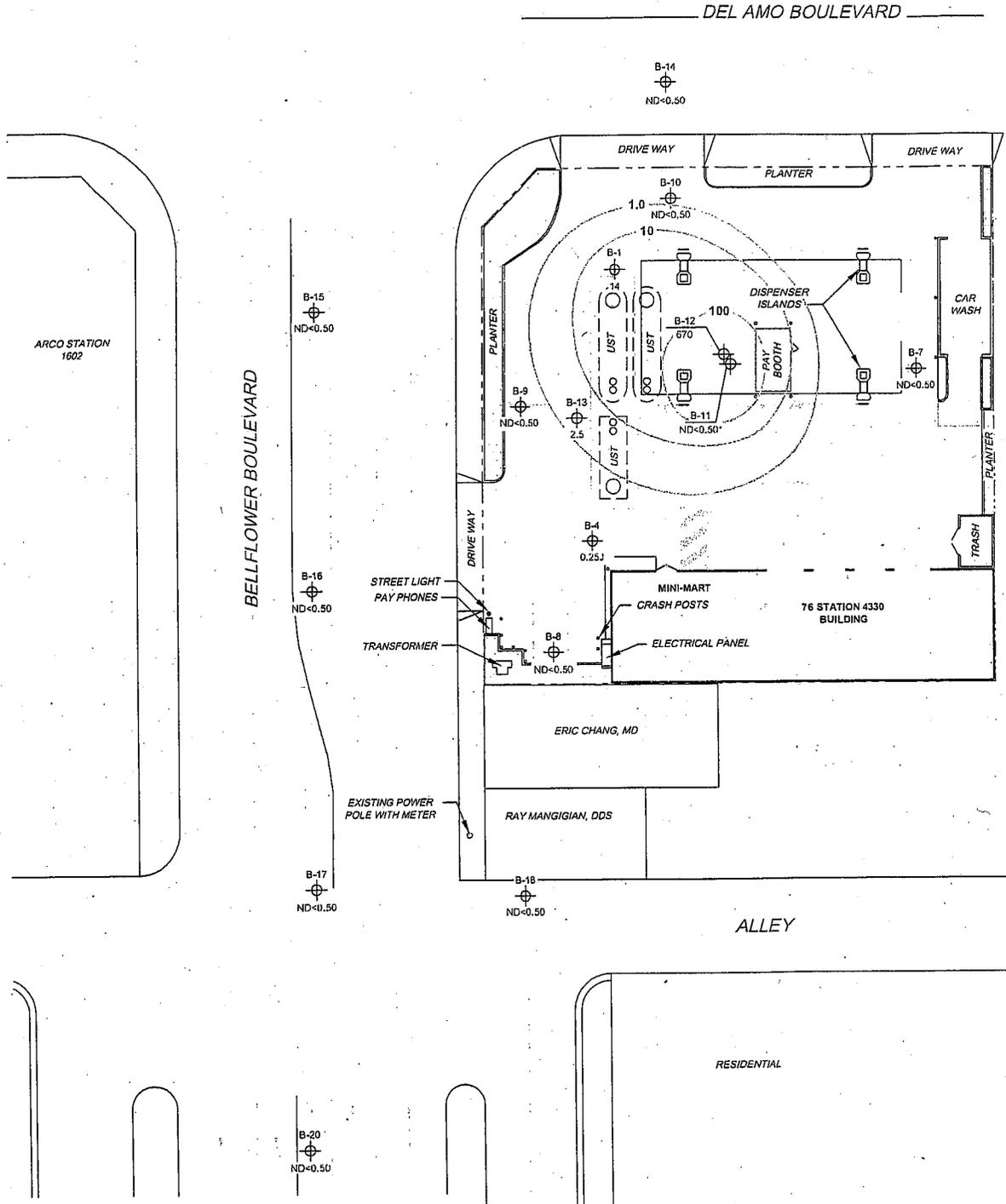
PROJECT: 173844
 FACILITY: 76 STATION 4330
 4870 BELLFLOWER BOULEVARD
 LAKEWOOD, CALIFORNIA

GROUNDWATER ELEVATION
 CONTOUR MAP
 June 30, 2010

FIGURE 2

LEGEND

- B-20  Monitoring Well with Dissolved-Phase Benzene Concentration (µg/l)
- 100  Dissolved-Phase Benzene Contour (µg/l)



NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples.
 µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report.
 J = estimated concentration, value is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL). * = not included in contour interpretation. UST = underground storage tank.



PROJECT: 173844
 FACILITY:
 76 STATION 4330
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 LAKEWOOD, CALIFORNIA

DISSOLVED-PHASE BENZENE
 CONCENTRATION MAP
 June 30, 2010

FIGURE 4