



# California Regional Water Quality Control Board

## Los Angeles Region



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Cal/EPA Secretary

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Arnold Schwarzenegger  
Governor

October 6, 2010

Mr. Chuck Kearsley  
President  
Barry Avenue Plating Company, Inc.  
2210 Barry Avenue  
Los Angeles, CA 90064

**APPROVAL OF REQUEST FOR MODIFICATION TO GENERAL WASTE DISCHARGE REQUIREMENTS FOR CALCIUM POLYSULFIDE MOLASSES AND VEGETABLE OIL INJECTION FOR SOIL AND GROUNDWATER CLEANUP AT PETROLEUM HYDROCARBON FUEL, VOLATILE ORGANIC COMPOUND AND/OR HEXVALENT CHROMIUM IMPACTED SITES – BARRY AVENUE PLATING, 2210 BARRY AVENUE, LOS ANGELES, CALIFORNIA 90064 (FILE NO. 08-136, CI-9459)**

Dear Mr. Kearsley:

On November 10, 2008, the Los Angeles Regional Water Quality Control Board (Regional Board) issued General Waste Discharge Requirements (WDR) Order No. R4-2007-0019 for the injection of calcium polysulfide (CPS) into soil for the remediation of hexavalent chromium (chromium VI) and into groundwater for the remediation of chromium VI and volatile organic compounds (VOCs) at Barry Avenue Plating Company in Los Angeles, California.

On January 30, 2009, the Regional Board approved a request for modifications to the General WDR including a reduction in the number of wells to be monitored and specifying the analytical method for hexavalent chromium, dissolved metals, and inorganic anions.

Twenty-six shallow and five deep soil injection borings were completed within areas of elevated hexavalent chromium concentrations in soil in the Magnesium Room and the Recycling Room on the Site and along the western portion of the building located on the adjacent property to the east from January 26, 2009 to May 5, 2009. A total of 8,350 gallons of a reductive agent, CPS and 151,627 gallons of water were injected. Confirmation soil sample results indicated that the maximum hexavalent chromium concentration had declined from 380 mg/kg to 38 mg/kg on the Site for a net decrease of 90 percent. Similarly, on the adjacent property to the east, the maximum chromium VI concentration had declined from 145 mg/kg to 21 mg/kg for a net decrease of 86 percent.

Approximately 14,151 gallons of 29 percent CPS solution and 298,822 gallons of water were also injected into groundwater using nine injection points and two existing monitoring wells from January 22, 2009 to April 14, 2009. Reductions in both hexavalent chromium and trichloroethene have occurred, with groundwater monitoring continuing as of August 2010.

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The chemical injection program has demonstrated a high level of success in reducing chromium VI and trichloroethene (TCE) concentrations in the plumes and an overall reduction in the size of the plumes at the site. As a result, on October 7, 2009, URS Corporation, the consultant for Barry Avenue Plating Company, proposed a corresponding reduction in the sampling program.

The revised groundwater monitoring program is focusing on wells and analyses that demonstrate the type and magnitude of the changes that have occurred due to the injection program and how those changes will begin to revert to baseline conditions. The following groundwater monitoring wells are recommended for continued monitoring based on a review of pre- and post-injection groundwater monitoring data – MW-7 and MW-15 (up-gradient); MW-3, MW-4, MW-5, MW-9, MW-10, MW-12, MW-14 [injection well], MW-19, GWI-08 [injection well], GWI-09 [injection well] (source area); and MW-17 and MW-18 (down-gradient)

The remaining site wells – MW-1, MW-2, MW-6, MW-8, MW-11, MW-13, and GWI-02 – would no longer be included in the program for the following reasons:

- Groundwater monitoring well MW-11 will be abandoned as the casing in this well is loose. The well is no longer needed as adjacent wells (MW-10, GWI-09, and MW-12) can delineate the plume.
- Wells MW-6 and GWI-02 are located inside the building on the adjacent property to the east. These wells will be abandoned as the groundwater concentrations in both wells were non-detect for chromium VI and at or below the MCL for VOCs in July 2009. These wells were located on the upgradient portion of the groundwater plume, which has now migrated away from both wells, so downgradient wells are more appropriately positioned to assess post-injection changes in the groundwater plume. The building is currently vacant, so access to the wells is available.
- VOC and chromium VI concentration in groundwater monitoring wells MW-1, MW-2, MW-8, and MW-13 have been consistently at trace to non-detect levels over the past four quarters and none of these wells are within the CPS injection zone. Additionally, the upgradient wells (MW-1 and MW-8) showed minimal change after CPS injections so additional monitoring of these wells will not provide data to support site closure decisions. Concentrations in downgradient well MW-13 have also been relatively stable compared to well MW-14 that is already being used to address plume delineation and remedial program effectiveness. With the completion of the active remedial program and the reduction in size and concentration of the VOC and chromium VI groundwater plumes, these wells are no longer needed for upgradient monitoring (MW-1 and MW-8), cross gradient (MW-2) or for downgradient monitoring (MW-13).

The revised Monitoring and Reporting Program (enclosed), which incorporates the requested modifications, is approved.

All monitoring reports should be sent to the Regional Board, ATTN: Information Technology Unit.

Mr. Chuck Kearsley  
Barry Avenue Plating Company, Inc.

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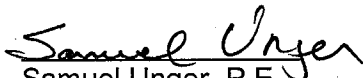
October 6, 2010

When submitting monitoring and technical reports to the Regional Board per these requirements, please include a reference to "Compliance File No. CI-9459", which will assure that the reports are directed to the appropriate file and staff. Also, please do not combine other reports with your monitoring and reports. 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.

If you have any additional questions, please contact the Project Manager, Mr. David Koo at (213) 620-6155, or the Section Chief of Groundwater Permitting and Land Disposal, Dr. Rebecca Chou at (213) 576-6618.


Sincerely,

  
Samuel Unger, P.E.  
Executive Officer

Enclosures: Revised Monitoring and Reporting Program No. CI-9459

cc: Mr. Phil Blum, Department of Toxic Substances Control  
Mr. Gregory Patterson, Musick, Peeler & Garrett, LLP  
Mr. Thomas J. Smith, Thomas J. Smith Attorney-at-Law  
Mr. Jerome Zimmerle, URS Corporation

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STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
MONITORING AND REPORTING PROGRAM NO. CI-9459  
FOR BARRY AVENUE PLATING SITE  
2210 BARRY AVENUE, LOS ANGELES, CA 90064  
(ORDER NO. R4-2007-0019, SERIES NO. 081)

I. REPORTING REQUIREMENTS

- A. Barry Avenue Plating (hereinafter Discharger) shall implement this monitoring program on the effective date of Regional Board Order No. R4-2007-0019. The Semi-Annual Groundwater Remediation Progress and Discharge Monitoring Report for the First Semi-Annual 2011, shall be received at the Regional Board by **January 15, 2011**. Subsequent 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

- B. If there is no discharge or injection during the reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.
- C. 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).
- D. 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.
- E. 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 Office). 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.

- F. 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.
- G. 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.
- H. 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 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.
- I. 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.
- J. 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.
- K. 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.

## II. CALCIUM POLYSULFIDE INJECTION MONITORING REQUIREMENTS

If additional injections occur, information documenting the injection program shall be submitted to the Regional Board as part of the next groundwater monitoring/remedial progress report.

The report(s) shall contain the following information regarding injection activities:

1. Map showing the location(s) of wells used for calcium polysulfide injection and bioenhancement compounds, namely molasses and vegetable oil, injection if used.
2. Written and tabular summary of calcium polysulfide injection and bioenhancement compounds, namely molasses and vegetable oil, if used. Include injection well identifications, injection dates, solution concentrations (in percent), average solution injection rates (in gallons per minute), total solution injected (in gallons), and cumulative total volume of calcium

polysulfide solutions and bioenhancement compounds, namely molasses and vegetable oil, if used, injected for the entire site.

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall conduct groundwater monitoring at the site. Groundwater samples shall be collected from groundwater monitoring wells MW-7 and MW-15 (up-gradient); MW-3, MW-4, MW-5, MW-9, MW-10, MW-12, MW-14 [injection well], MW-19, GWI-08 [injection well], GWI-09 [injection well] (source area); and MW-17 and MW-18 (down-gradient) to monitor the effectiveness of the remediation. Injection points shall not be used as monitoring points, except as noted above. Groundwater shall be monitored for the duration of the remediation in accordance with the following discharge monitoring program:

CONSTITUENT	ANALYTICAL METHOD	UNITS	MINIMUM FREQUENCY OF ANALYSIS
Volatile Organic Compounds (VOCs)	EPA 8260B	µg/L	Semi-Annual <sup>1</sup>
Hexavalent Chromium	EPA 7199	µg/L	Semi-Annual <sup>1</sup>
Total Chromium	EPA 6010B	µg/L	Semi-Annual <sup>1</sup>
Arsenic	EPA 6010B	µg/L	Semi-Annual <sup>1,2</sup>
Manganese	EPA 6010B	µg/L	Semi-Annual <sup>1,2</sup>
Calcium	EPA 6010B	µg/L	Semi-Annual <sup>1,2</sup>
Boron	EPA 6010B	mg/L	Semi-Annual <sup>1,2</sup>
Nitrate	EPA 300.0	mg/L	Semi-Annual <sup>1,2</sup>
Sulfate	EPA 300.0	mg/L	Semi-Annual <sup>1,2</sup>
Chloride	EPA 300.0	mg/L	Semi-Annual <sup>1,2</sup>
Total Dissolved Solids	EPA 160.1	mg/L	Semi-Annual <sup>1,2</sup>
Dissolved Oxygen	In situ	mg/L	Semi-Annual <sup>1</sup>
Oxidation / Reduction Potential	In situ	mV	Semi-Annual <sup>1</sup>
pH	In situ	pH units	Semi-Annual <sup>1</sup>
Specific Conductivity	In situ	µmhos	Semi-Annual <sup>1</sup>
Temperature	In situ	°F / °C	Semi-Annual <sup>1</sup>
Turbidity	In situ	NTU	Semi-Annual <sup>1</sup>
Groundwater Elevation	In situ	Feet, mean sea level and below ground surface	Semi-Annual <sup>1</sup>

<sup>1</sup> Semi-Annual; if additional injections are necessary then, once before injection and Quarterly thereafter.

<sup>2</sup> Arsenic, manganese, nitrate, sulfate, and calcium are being used to track changes within versus outside the injection zone so a representative set of wells (MW-4, MW-15, MW-3, MW-12, MW-14, and GWI-09) was selected within each area in accordance with the March 2008 Removal Action Workplan.

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 may be modified 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, P.E.  
Executive Officer

Date: October 6, 2010