

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

MONITORING AND REPORTING PROGRAM NO. CI-9579
FOR

CENTRAL REGION ELEMENTARY #13 (SITE)
FOR LOS ANGELES UNIFIED SCHOOL DISTRICT
3200 WEST WASHINGTON BOULEVARD
LOS ANGELES, CALIFORNIA 90017

(PILOT TEST FOR GROUNDWATER REMEDIATION
USING IN-SITU CHEMICAL OXIDATION)
FILE NO. 09-192, DTSC NO. 304490

ORDER NO. R4-2007-0019
SERIES NO. 119

I. REPORTING REQUIREMENTS

- A. Los Angeles Unified School District (hereinafter Discharger) shall implement this monitoring program on the effective date of Regional Board Order No. R4-2007-0019. The Quarterly Groundwater Remediation Progress and Discharge Monitoring Report for the First Quarter 2010, shall be received at the Regional Board by **April 15, 2010**. Subsequent reports shall be received at the Regional Board according to the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January – March	April 15
April – June	July 15
July – September	October 15
October – December	January 15

- 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. 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 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.

- E. The method limits (MLs) employed for groundwater 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.
- 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 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 exclusions 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. BIOX OVER-SPRAY MONITORING REQUIREMENT

Once the pilot test has been performed by overspraying BIOX® on the capillary fringe of the

shallow groundwater A1-zone, a report documenting the results of the pilot test shall be submitted to the Regional Board. The pilot test must include the results of baseline parameters in groundwater prior to the application of BIOX®. The pilot test report is due by **April 15, 2010**.

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

1. Map showing the location(s) of the sprayed area.
2. A thorough summary of the quantities of materials used for the BIOX® mix. Include application/overspray dates, total area of the application, solution concentrations, total solution used (in gallons).
3. Interpretation of the results and evaluation of the pilot test effectiveness.

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall conduct groundwater monitoring at the site. Groundwater samples shall be collected from the groundwater monitoring wells described by function in Tables 1, 2 and 3 (refer to attached Groundwater Over-spray Area Map):

Table 1. Monitoring wells surrounding the BIOX® over-spray area

Well ID	Groundwater Zone	Location with respect to the over-spray area
C13-CL4A	A1	Up-gradient
C13-CL2A	A	Up-gradient
C13-CL6A	A1	Cross-gradient
C13-GW1	A	Cross-gradient
C13-GW20A1	A1	Cross/down-gradient
C13-GW20A	A	Cross/down-gradient
C13-GW12A1	A1	Down-gradient
C13-GW12A	A	Down-gradient
C13-GW15A	A	Down-gradient
C13-CL2B	B	Up-gradient
C13-GW12B	B	down-gradient
C13-CL6B	B	cross-gradient

Table 2. Monitoring wells located within the BIOX® over-spray area

Well ID	Groundwater Zone	Location with respect to the over-spray area
C13-GW11A1	A1	Within the area of treatment
C13-GW16A1	A1	Within the area of treatment
C13-GW11A	A	Within the area of treatment
C13-GW16A	A	Within the area of treatment

Table 3. Sentinel/Recovery Wells

Well ID	Groundwater Zone	Location with respect to the over-spray area
C13-CL6A	A1	Cross-gradient
C13-GW15A	A	Cross-gradient
C13-GW20A1	A1	Cross/down-gradient
C13-GW20A	A	Cross/down-gradient
C13-GW12A1	A1	Down-gradient
C13-GW12A	A	Down-gradient

Groundwater shall be monitored for the duration of the remediation in accordance with the following discharge monitoring program:

Table 4. Monitoring Program

CONSTITUENT	TYPE OF SAMPLE	UNITS	MINIMUM FREQUENCY OF ANALYSIS
Dissolved CAM metals, total iron and boron (EPA Method 6010B/200.7)	Grab	µg/L	Baseline, quarterly thereafter
Hexavalent Chromium (EPA Method 218.6)	Grab	µg/L	Baseline, quarterly thereafter
Volatile Organic Compounds (EPA Method 8260B)	Grab	µg/L	Baseline, quarterly thereafter
1,4-Dioxane (EPA Method 8270C)	Grab	µg/L	Baseline, semi-annually
Total petroleum hydrocarbons (EPA Method 8015M))	Grab	µg/L	Baseline, quarterly thereafter
Anions (bromide, chloride, bromate, nitrate, nitrite, phosphate, sulfate) (EPA Method 300.1) Manganese (EPA Method 6020)	Grab	µg/L	Baseline, quarterly thereafter
Cations (sodium, calcium, magnesium, potassium) (EPA Method 6010B)	Grab	µg/L	Baseline, quarterly thereafter
Total suspended solids (EPA Method 2540D)	Grab	mg/L	Baseline, quarterly thereafter

Table 4. Monitoring Program (cont.)

CONSTITUENT	TYPE OF SAMPLE	UNITS	MINIMUM FREQUENCY OF ANALYSIS
Total dissolved solids (EPA Method 2540C)	Grab	mg/L	Baseline, quarterly thereafter
Biological Oxygen Demand (Method SM 5210B)	Grab	mg/L	Baseline, quarterly thereafter
Bicarbonate and carbonate (Method SM 2320B)	Grab	mg/L	Baseline, quarterly thereafter
Fluoride (Method SM 4500-FC)	Grab	mg/L	Baseline, quarterly thereafter
Ferrous iron (Method SM-3500)	Grab	mg/L	Baseline, quarterly thereafter
Heterotrophic bacterial count (Method SM-9215B)	Grab	CFU/mL	Baseline, quarterly thereafter
Color (Method SM-2120B)	Grab	APHA scale	Baseline, quarterly thereafter
Hardness (Method SM-2340C)	Grab	mg/L	Baseline, quarterly thereafter
Total Organic Carbon (EPA Method 5310D)	Grab	mg/L	Baseline, quarterly thereafter
Chemical oxygen demand (Method SM-5220D)	Grab	mg/L	Baseline, quarterly thereafter
pH	In situ	pH units	Baseline, quarterly thereafter
Specific Conductivity	In situ	µmhos	Baseline, quarterly thereafter
Oxidation - Reduction Potential	In situ	mV	Baseline, quarterly thereafter
Dissolved Oxygen	In situ	mg/L	Baseline, quarterly thereafter
Temperature	In situ	°F/°C	Baseline, quarterly thereafter
Turbidity	In-situ	NTU	Baseline, quarterly thereafter
Free product	In-situ	ft	Baseline, quarterly thereafter
Groundwater elevation	In-situ	ft	Baseline, 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

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 _____.

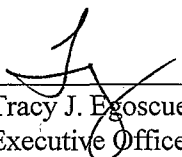
(Signature)

(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:



Tracy J. Egoscue
Executive Officer

Date:

3/15/10