

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

**MONITORING AND REPORTING PROGRAM NO. CI-8974
FOR
THE BOEING COMPANY
FORMER BOEING COMPTON SITE**

FILE NOS. 96-056 AND 96-057

The Discharger shall implement this monitoring and reporting program on the effective date of this Order.

I. GROUNDWATER MONITORING PROGRAM

It is anticipated that the pilot test will be initiated in the third quarter of 2005. The following groundwater wells and amendment points will be included in the sampling program:

- Group A: AW0003, AW0008, and AW0034
- Group B1: MW0026, MW-16, MW0027, MW0028, and MW0029
- Group B2: MW-7, TW-5, TW-1, and MW0037
- Group C: TW-6,
- Group D: MW-3, TW-12, TW-14

Figure 1 shows the location of the Site. Groundwater well and amendment point locations at the Site are shown in (Figures 4, 5 and 6). Group A sampling points are amendment points. The Group B points are monitoring wells within each treatment area. Group B1 wells consist of monitoring wells that are located in close proximity to oil distribution zones, and will be used to evaluate oil consumption and distribution. Group B2 wells are monitoring wells located somewhat farther from the amendment wells but within the treatment area; they will be used to evaluate the effectiveness of the biologically active zones over time. All Group A and B wells will be used for performance monitoring purposes. The Group C sampling point is a downgradient sample location, and Group D are upgradient sample points.

Baseline sampling will take place prior to injection. Upon completion of the injection of the emulsified oil, samples will be taken from Group A and Group B1 monitoring wells (Figures 4, 5 and 6) and will be analyzed for field parameters (oxidation-reduction potential, dissolved oxygen, pH, specific conductance, temperature, turbidity and groundwater elevation), chlorinated volatile organic compounds (VOCs), total organic carbon (TOC) and volatile fatty acids (VFAs) for process monitoring purposes and to provide post-injection baselines.

The required constituents to be analyzed and the monitoring schedule for each sample group for the 3-year pilot test are shown below.

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Daily Injections	Liters	Measurement	Per injection
Groundwater Elevation	Feet below ground surface (bgs)	In situ	Group A: Baseline, post oil injection and quarterly Group B1: Baseline, post oil injection and quarterly Group B2: Baseline and quarterly Group C: Baseline and quarterly Group D: Baseline and quarterly Group A-D: Semi-annually after four quarters
Dissolved Oxygen	mg/l	Grab	Group A: Baseline, post oil injection and quarterly Group B1: Baseline, post oil injection and quarterly Group B2: Baseline and quarterly Group C: Baseline and quarterly Group D: Baseline and quarterly Group A-D: Semi-annually after four quarters
Oxidation-Reduction Potential	Millivolts	Grab	Group A: Baseline, post oil injection and quarterly Group B1: Baseline, post oil injection and quarterly Group B2: Baseline and quarterly Group C: Baseline and quarterly Group D: Baseline and quarterly Group A-D: Semi-annually after four quarters
PH	pH units	Grab	Group A: Baseline, post oil injection and quarterly Group B1: Baseline, post oil injection and quarterly Group B2: Baseline and quarterly Group C: Baseline and quarterly Group D: Baseline and quarterly Group A-D: Semi-annually after four quarters
Temperature	Degrees C	Grab	Group A: Baseline, post oil injection and quarterly Group B1: Baseline, post oil injection and quarterly Group B2: Baseline and quarterly Group C: Baseline and quarterly Group D: Baseline and quarterly Group A-D: Semi-annually after four quarters
Specific Conductance	µS/cm	Grab	Group A: Baseline, post oil injection and quarterly Group B1: Baseline, post oil injection and quarterly Group B2: Baseline and quarterly Group C: Baseline and quarterly Group D: Baseline and quarterly Group A-D: Semi-annually after four quarters
Turbidity	NTU	Grab	Group A: Baseline, post oil injection and quarterly Group B1: Baseline, post oil injection and quarterly Group B2: Baseline and quarterly Group C: Baseline and quarterly Group D: Baseline and quarterly Group A-D: Semi-annually after four quarters
Chlorinated Volatile Organic Compounds (EPA Method 8260B)	µg/l	Grab	Group A: Baseline, post oil injection and quarterly Group B1: Baseline, post oil injection and quarterly Group B2: Baseline and quarterly Group C: Baseline and quarterly Group D: Baseline and quarterly Group A-D: Semi-annually after four quarters
Total Organic Carbon (EPA Method 9060 Modified) and Volatile Fatty Acids	mg/l	Grab	Group A: Baseline, post oil injection and quarterly Group B1: Baseline, post oil injection and quarterly Group B2: Baseline and semi-annually Group C: Baseline and semi-annually Group D: Baseline and semi-annually
<i>Dehalococcoides</i> PCR	presence or absence	Grab	Group A: Baseline and semi-annually Group B1: Baseline and semi-annually Group B2: Baseline and semi-annually Group C: Baseline and semi-annually Group D: Baseline and semi-annually

Dissolved Metals (Manganese, Iron and Arsenic) and Anions (sulfate, nitrate, nitrite and chloride) and Total Sulfides	mg/l	Grab	Group A: Baseline and semi-annually Group B1: Baseline and semi-annually Group B2: Baseline and semi-annually Group C: Baseline and semi-annually Group D: Baseline and semi-annually
Dissolved Hydrocarbon Gases (ethane, ethane, and methane)	mg/l	Grab	Group A: Baseline and quarterly Group B1: Baseline and quarterly Group B2: Baseline and quarterly Group C: Baseline and quarterly Group D: Baseline and quarterly Group A-D: Semi-annually after four quarters

All groundwater monitoring reports must include, at minimum, the following:

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

II. AMENDMENT INJECTION MONITORING REQUIREMENTS

The reports shall contain the following information regarding injection activities:

1. Depth of injection points;
2. Quantity of amendment injected and dates injected; and
3. Total amount of amendment injected.

III. REPORTING REQUIREMENTS

The first monitoring report under this Program is due by 28 February 2006. This monitoring and reporting program supercedes previous requirements stated in work plan approval letters.

The Discharger is required to submit a preliminary report including baseline and oil injection data, plus quarterly reports for the first 4 quarters. Subsequently, semi-annual monitoring reports will be submitted for each additional year (two years estimated). The groundwater monitoring wells and amendment points will be gauged and sampled, and results will be reported to the Regional Water Quality Control Board (Regional Board) under the Monitoring and Reporting Program for the General Waste Discharge Requirements according to the following schedule:

Reporting Period	Sampling Month(s)	Report Due Date
September – February 2005 (Baseline and Post-Injection)	September-October 2005 (December 2005-January 2006)	February 28, 2006
March-May 2006	March 2006	June 30, 2006
June-August 2006	June 2006	September 29, 2006
September-November 2006	September 2006	December 31, 2006
December 2006-February 2007	December 2006	March 30, 2007
March-August 2007	June 2007*	September 28, 2007
September 2007-February 2008	December 2007	March 31, 2008
March 2008-August 2008	June 2008	September 30, 2008
September 2008-February 2009	December 2008	March 31, 2009

* Semi-annual sampling begins

The Discharger shall submit Reports detailing the results of the remediation. The reports should include an evaluation of the effectiveness of using the amendment and KB-1™ solution to remediate VOC-contaminated groundwater at the Site, the impact of any by-products on the receiving groundwater quality, and any other effects the *in situ* treatment may have. The Discharger is required to submit the following reports pursuant to their respective due dates:

Report	Due Dates
Preliminary Report	February 28, 2006
Final Report	June 30, 2009

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.

Whenever wastes associated with the discharge under this Order, are transported to a different disposal site, the following shall be reported in the monitoring report: type and quantity of wastes; name and address of the hauler (or method of transport if other than by hauling); and location of the final point(s) of disposal.

IV. 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)"

V. 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.

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: _____
Executive Officer

Date: _____