

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

**MONITORING AND REPORTING PROGRAM NO. CI-8586  
FOR  
THE BOEING COMPANY  
FORMER BOEING COMPTON SITE**

**ORDER NO. R4-2002-0030 (Series 024)  
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 second 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, and TW-1
- Group C: TW-6
- Group D: MW-1

Groundwater well and amendment point locations are shown in (Figures 1, 2, 3 and 4). 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. Group C sampling point is a downgradient sample location, and Group D is an upgradient sample point.

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 2, 3 and 4) 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
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
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
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
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
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
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
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
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 Weeks semi-annually
Dehalococcoides 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, 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

Once the sampling for the first year has been completed, all sampling locations will be sampled semi-annually. Beginning March 2006, wells will be sampled according to the schedule below:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Groundwater Elevation	Feet below ground surface (bgs)	In situ	Semi-annually
Dissolved Oxygen	mg/l	grab	Semi-annually
Oxidation-Reduction Potential	Millivolts	grab	Semi-annually
pH	pH units	grab	Semi-annually
Temperature	Degrees C	grab	Semi-annually
Specific Conductance	µS/cm	grab	Semi-annually
Turbidity	NTU	grab	Semi-annually
Chlorinated Volatile Organic Compounds (EPA Method 8260B)	µg/l	grab	Semi-annually
Total Organic Carbon (EPA Method 9060 Modified) and Volatile Fatty Acids	mg/l	grab	Semi-annually
Dehalococoides PCR	presence or absence	grab	Semi-annually
Dissolved Metals (Manganese, Iron and Arsenic) and Anions (sulfate, nitrate, nitrite, chloride, and total sulfides)	mg/l	grab	Semi-annually
Dissolved Hydrocarbon Gases (ethane, ethane, and methane)	mg/l	grab	Semi-annually

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. 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;
3. Total amount of amendment injected.

### III. REPORTING REQUIREMENTS

The first monitoring report under this Program is due by November 30, 2005. This monitoring and reporting program supercedes previous requirements stated in work plan approval letters. Monitoring reports shall be received by the dates in the following schedule.

Boeing 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, 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
July - September (baseline and post-injection) 2005	June, July 2005	November 30, 2005
October – December, 2005	November 2005	February 28, 2006
January – March 2006	February 2006	May 31, 2006
April – June 2006	May 2006	August 30, 2006
July-September 2006	August 2006	November 28, 2006
October 2006 to March 2007*	February 2007	May 31, 2006
April – September 2007	August 2006	November 27, 2007
October 2007– March 2008	February 2008	May 30, 2008
July – December 2008	August 2008	November 27, 2008

\* Semi-annual sampling begins

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.

Additionally, Boeing is required to submit a final report by **December 28, 2008** before a full-scale bioremediation project can be implemented.

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: December 14, 2004