

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

**MONITORING AND REPORTING PROGRAM NO. CI-8566  
FOR  
BOEING REALTY CORPORATION, C-1 FACILITY  
LONG BEACH, CALIFORNIA  
(CLEANUP AND ABATEMENT ORDER 95-048, FILE NO. 95-034)**

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

**I. GROUNDWATER MONITORING PROGRAM**

**A. BUILDING 1D**

In the Building 1D Area the following two groups of groundwater wells will be included in the sampling program. Groundwater well locations are shown in attached Figures 1, 2, and 3.

Group A: B1D-PT1 through 7; and MW1056 (8 wells total).

Group B: B1D-PM1 through 6 (6 wells total).

Group A wells are pilot test area wells, which means they are located within the influence zone of the injection wells. Group A wells will be sampled quarterly. Group B wells are monitoring wells downgradient of the injection wells. Group B wells will be sampled semi-annually.

The required constituents to be analyzed and the monitoring schedule for each well group are shown in the table below. Baseline sampling will be performed prior to injection.

<u>CONSTITUENT</u>	<u>UNITS</u>	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u>
Volatile Fatty Acids	mg/l	grab	A Group: Quarterly B Group: Semiannually
PCR assay (for Dehalococcoides Ethenogenes)	NA	grab	A Group: 1 <sup>st</sup> , 3 <sup>rd</sup> , and 4 <sup>th</sup> Quarters B Group: Semiannually

**B. BUILDING 3**

In the Building 3 Area the following three groups of groundwater wells will be included in the sampling program. Groundwater well locations are shown on Figure 4.

Group A: B3-PT1 through 7; and extraction wells (B3-EW1 through 3). (10 wells total)

Group B: B3-PT8 through 10; MW1011, and MW1043. (5 wells total)

Group C: B3-PM1 through 4. (4 wells total)

Group A wells consist of extraction wells and monitoring wells located within the influence zone of the injection/extraction system where the fastest rate of change is anticipated. Group A wells will be sampled monthly.

Group B wells are located within the influence zone of the injection/extraction system where a more moderate rate of change, compared to Group A, is anticipated. Group C wells are monitoring wells outside of the influence of the injection/extraction system. Group B and C wells will be sampled semi-annually.

Groundwater well locations are shown in attached Figure 4.

The required constituents to be analyzed and the monitoring schedule for each well group are shown below. Baseline sampling will be performed prior to injection.

<u>CONSTITUENT</u>	<u>UNITS</u>	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u>
Volatile Fatty Acids	mg/l	grab	Group A: quarterly Group B and C: semiannually
PCR assay (for Dehalococoides Ethenogenes)	NA	grab	Group A: quarterly Group B and C: semiannually

**C. BUILDING 36**

In the Building 36 Area the following two groups of groundwater wells will be included in the sampling program. Groundwater well locations are shown in attached Figures 5 and 6.

Group A: B36-PT1 through 5 and monitor well MW1069. (Six wells total)

Group B: B36-PM1 through 3 [B36-PM3 is also referred to as MW1070]. (Three wells total)

Group A wells are pilot test area wells, which means they are located within the influence zone of the injection wells. Group A wells will be sampled quarterly. Group B wells are monitoring wells downgradient of the injection wells. Group B wells will be sampled semi-annually.

The required constituents to be analyzed and the monitoring schedule for each well group are shown below. Baseline sampling will be performed prior to injection. Baseline sampling will be performed for both Group A and Group B wells. After injection, sampling will be performed for two years (eight quarters).

<u>CONSTITUENT</u>	<u>UNITS</u>	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u>
Volatile Fatty Acids	mg/l	grab	A Group: Quarterly B Group: Semiannually
PCR assay (for Dehalococoides Ethenogenes)	NA	grab	A Group: 1 <sup>st</sup> , 3 <sup>rd</sup> , and 4 <sup>th</sup> Quarters B Group: Semiannually

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. Quarterly observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

#### AMENDMENT INJECTION MONITORING REQUIREMENTS

The reports shall contain the following information regarding injection activities:

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

## II. REPORTING REQUIREMENTS

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. This monitoring and reporting program supercedes previous requirements stated in work plan approval letters. The reports will be submitted in accordance with the following schedule:

<b>Report</b>	<b>Due Dates</b>
Final Building 1D Pilot Test Report	December 30, 2004
Building 3 Quarterly Progress Reports	September 30, 2003
	December 31, 2003
	March 31, 2004
	June 30, 2004
Final Building 3 Report	June 30, 2004
Building 36 Annual Progress Reports	January 31, 2004
	January 31, 2005
Final Building 36 Report	January 31, 2006

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.

**III. 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)"

**IV. 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: \_\_\_\_\_  
Dennis A. Dickerson  
Executive Officer

Date: April 3, 2003