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

MONITORING AND REPORTING PROGRAM NO. CI 8517
BOEING REALTY CORPORATION - FORMER C-1 FACILITY
(IN-SITU CHEMICAL REDUCTION)
(FILE NO. 95-034)

Boeing Realty Corporation (hereafter "Discharger") shall implement this Monitoring and Reporting Program (Program) on the effective date of this Order.

I. Discharge Monitoring

The Discharger shall sample from groundwater monitoring wells for baseline groundwater parameters two weeks prior to the start of the approved remediation. Monitoring of the amendment solution during remediation consists of samples collected from amendment solution delivery system, extraction wells, and monitor wells (see Table 1, Figures 6, 7, and 8).

TYPE OF AMENDMENT SOLUTIONS:

The amendment solutions are selected based on type of contaminant in soil or groundwater and soil or groundwater conditions in source area to be treated and are presented in the remediation plan, as approved by the Executive Officer.

TYPE OF DELIVERY SYSTEM:

The amendment solutions will be delivered into the subsurface using an injection only (INJ), a combined extraction and injection (INJ-EXT), and a combined extraction and infiltration (INF) system as presented in the remediation plan, as approved by the Executive Officer. Parameters will be monitored at the extraction wells (EW) and amendment treatment system (TS) as specified in the remediation plan.

MONITOR WELL LOCATIONS:

Monitoring well MW1055 is positioned upgradient of the amendment delivery system for background measurement purposes (MW-BG), and point-of-compliance monitoring wells MW_1020, MW_1019, and a new monitor well to be constructed in an accessible location near existing monitor well DPMW_0025 are positioned downgradient of the amendment delivery system outside the existing hexavalent chromium contamination and on Boeing property. The point-of-compliance monitor wells are sampled to evaluate compliance with WDR permit conditions (MW-C). Additional monitor wells (Table 1) are located in proximity to within the amendment delivery system to monitor effectiveness of remediation (MW-R). The locations of monitor wells have been specified in the remediation plan and the remediation plan approval letter and are shown on Figures 6, 7 and 8. The monitoring frequency for MW-R monitor wells has been specified in the remediation plan.

The remediation system shall be monitored during the implementation of the remediation program in accordance with the following discharge monitoring program:

CONSTITUENT	SAMPLE LOCATION	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total amendment delivered per injection point	INJ	Liters/day (to indicate solution concentration)	In situ	Daily (See Figures 4 and 5 in WDR)
Total volume of amended water delivered to infiltration basin	INF	Liters/day (to indicate solution concentration)	In situ	Daily for first month
				Weekly thereafter
Total daily groundwater extraction	EW and TS Influent	Gallons/day	In situ	Daily for first month
				Weekly thereafter
Chlorinated Volatile Organic Compounds (EPA Method 8260 B)	MW-R, MW-C, and MW-BG	µg/l	grab	Quarterly
Hexavalent chromium (EPA Method 7196 A)	MW-R, MW-C, and MW-BG	mg/l	grab	Quarterly
	EW	mg/l	grab	Weekly during operation
				Quarterly thereafter
	TS Effluent	mg/l	grab	Daily for first week
				Every week for second through fourth week
				Every month second and third month
				Quarterly thereafter
pH and Conductivity	MW-R, MW-C, and MW-BG	pH and microsiemens	grab	Quarterly
	EW	pH and microsiemens	grab	Daily for first week of operation
				Weekly from week two throughout operation
				Quarterly thereafter
	TS Effluent	pH and microsiemens	grab	Daily for first week
				Every week for second through fourth week
				Every month second and third month
				Quarterly thereafter
Total Chromium (EPA Method 6010B)	MW-R, MW-C, and MW-BG	mg/l	grab	Quarterly

CONSTITUENT	SYSTEM/ SAMPLE LOCATION	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Oxidation-reduction potential	MW-R, MW-C, and MW-BG	millivolts	grab	Quarterly
	EW	millivolts	grab	Daily for first week of operation
				Weekly from week two throughout operation
				Quarterly thereafter
	TS Effluent	millivolts	grab	Daily for first week
				Every week for second through fourth week
				Every month second and third month
				Quarterly thereafter
Temperature	MW-R, MW-C, and MW-BG	^{0}F / ^{0}C	grab	Quarterly
	EW	^{0}F / ^{0}C	grab	Daily for first week of operation
				Weekly from week two throughout operation
				Quarterly thereafter
	TS Effluent	^{0}F / ^{0}C	grab	Daily for first week
				Every week for second through fourth week
				Every month second and third month
				Quarterly thereafter
Dissolved Oxygen	MW-R, MW-C, and MW-BG	mg/l	grab	Quarterly
	EW	mg/l	grab	Daily for first week of operation
				Weekly from week two throughout operation
				Quarterly thereafter
	TS Effluent	mg/l	grab	Daily for first week
				Every week for second through fourth week
				Every month second and third month
				Quarterly thereafter
Groundwater Elevation	MW-R, MW-C, and MW-BG	Feet, mean sea level (msl) and below ground surface (bgs)	In situ	Monthly for first three months
				Quarterly thereafter
	EW	Feet, mean sea level (msl) and	In situ	Weekly for first month Monthly thereafter

		below ground surface (bgs)		

CONSTITUENT	SYSTEM/ SAMPLE LOCATION	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Nitrate, nitrite and chloride	MW-R, MW-C, MW-BG, and EW	mg/l	grab	Quarterly
Total and dissolved arsenic, iron, and manganese	MW-R, MW-C, MW-BG, and EW	mg/l	grab	Quarterly
Calcium, Sulfate, and Total Organic Carbon	MW-R, MW-C, MW-BG, and EW	mg/l	grab	Quarterly
Ethene, ethane, methane and carbon dioxide	MW-R, MW-C, MW-BG and EW	mg/l	grab	Quarterly

II. Reporting and Laboratory Analyses

A. REPORTING REQUIREMENTS

1. In accordance with section 13267 of the California Water Code, the Discharger shall furnish, under penalty of perjury, technical monitoring reports to the Regional Board during the remediation and during the post remediation monitoring period. Such reports shall be submitted in accordance with specifications approved by the Executive Officer.

2. The monitoring reports shall be submitted quarterly by the 15th of January, April, July, and October, with the first report due January 15, 2003.

3. All monitoring reports shall include discharge limitations in the Order (see A. Discharge Limits), tabulated analytical data, the chain of custody, laboratory report (including but not limited to date and time of sampling, date of analyses, method of analysis and detection limits). If there is no discharge, the report shall so state it.

4. The report shall contain both tabular and graphical summaries of the monitoring data obtained prior to and proceeding the remediation. In addition, the Discharger shall discuss the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with site's waste discharge requirements, if any.

5. Six months after the end of the remediation, the Discharger shall submit a final summary report to the Regional Board to report the comprehensive findings observed during the source area remediation and post remediation monitoring period.

B. LABORATORY ANALYSIS REQUIREMENTS

1. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer.

2. Samples shall be analyzed within allowable holding time limits as specified in 40 CFR Part 136.3. All quality assurance/quality control (QA/QC) items should be run on the same dates

when samples were actually analyzed and documentation shall accompany the laboratory reports.

3. The detection limits employed for sample analyses shall be lower than the permit limits established for a given parameter, unless the Discharger can demonstrate that a particular detection limit is not attainable and obtains approval for a higher detection limit from the Executive Officer.

III. Notification

1. The Discharger shall inform this Regional Board one business day before the start of the discharge.

2. The Discharger shall inform this Regional Board within one business day by telephone in the event that any discharge exceeds the discharge limit. Written confirmation shall follow within one week and shall include date and time, estimated volume and/or concentration, duration, cause, and all corrective actions taken.

3. The Discharger shall inform this Regional Board of the termination of the remediation project.

Ordered by: _____ Date: December 19, 2002

Dennis A. Dickerson
Executive Office

TABLE 1

REMEDIATION PROGRESS MONITOR WELLS

BL5_MW_1
BL5_MW_2
BL5_MW_3
BL5_MW_4
BL5_MW_5
BL5_MW_7
BL5_MW_8
BL5_MW_9
BL5_MW_10
BL5_MW_12
BL5_MW_13
BL5_MW_14

MW_1001
MW_1011
MW_1013
MW_1017
MW_1021
MW_1026
MW_1027
MW_1034
MW_1041
MW_6011

DPMW_0002
DPMW_0007
DPMW_0008

VEW-3

Monitor well 1 as presented in the California Regional Water Quality Control Board approved letter for the Remediation plan
Monitor well 2 as presented in the California Regional Water Quality Control Board approved letter for the Remediation plan
Monitor well 3 as presented in the California Regional Water Quality Control Board approved letter for the Remediation plan