

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

**MONITORING AND REPORTING PROGRAM NO. CI-8380  
FOR  
SCHLUMBERGER RESOURCE MANAGEMENT SERVICES**

**ORDER NO. R4-2002-0030 (Series No. 001)  
SITE ID NO. 2047300**

I. Monitoring and Reporting Requirements

- A. The Schlumberger Resource Management Services (hereinafter Discharger) shall implement this monitoring program on the effective date of this enrollment (May 29, 2002) under Regional Board Order No. R4-2002-0030. The monitoring reports shall be submitted monthly by the 15<sup>th</sup> of the following month, with the first report due August 15, 2002, for the first six month of the pilot test. Following that, the first quarterly monitoring report under this program, for January – March 2003, shall be received at the Regional Board by April 15, 2003. Subsequent monitoring 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
Annual Summary Report	March 1 of each year

- 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 1 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 discuss 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.
- D. The Discharger shall comply with requirements contained in Section G. of Order No. R4-2002-0030 “*Monitoring and Reporting Requirements*” in addition to the aforementioned requirements.

June 14, 2002

II. Discharge Monitoring

The Discharger shall sample from groundwater monitoring wells for baseline groundwater parameters two weeks prior to the start of the pilot test. Monitoring of the Potassium Permanganate Pilot Test shall consist of samples collected from two monitoring wells upgradient of the pilot study area (MW10 and MW11), four monitoring wells in the application area (MW1, MW2, MW3, and MW4) and from three offsite downgradient monitoring wells (MW5S, MW6, and EX2). All these wells shall be monitored for in accordance with the following discharge monitoring program:

<u>CONSTITUENT</u>	<u>UNITS</u>	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u> <sup>[1]</sup>
Total daily injection waste flow	liters/day (to indicate solution concentration)	In situ	Daily during injection
Chlorinated Volatile Organic Compounds (EPA Method 8260B)	µg/l	grab	<ul style="list-style-type: none"> <li>• Weekly first month</li> <li>• Monthly second month through sixth month</li> <li>• Quarterly thereafter</li> </ul>
Total Organic Carbon (EPA Method 9060 Modified)	µg/l	grab	<ul style="list-style-type: none"> <li>• Weekly first month</li> <li>• Monthly second month through sixth month</li> <li>• Quarterly thereafter</li> </ul>
Total dissolved solids and Total suspended solids	mg/l	grab	<ul style="list-style-type: none"> <li>• Weekly first month</li> <li>• Monthly second month through sixth month</li> <li>• Quarterly thereafter</li> </ul>
Specific Conductivity	µmhos/cm	grab	<ul style="list-style-type: none"> <li>• Weekly first month</li> <li>• Monthly second month through sixth month</li> <li>• Quarterly thereafter</li> </ul>
Turbidity	NTU	grab	<ul style="list-style-type: none"> <li>• Weekly first month</li> <li>• Monthly second month through sixth month</li> <li>• Quarterly thereafter</li> </ul>
pH	pH units	grab	<ul style="list-style-type: none"> <li>• Weekly first month</li> <li>• Monthly second month through sixth month</li> <li>• Quarterly thereafter</li> </ul>
Oxidation-reduction potential	millivolts	grab	<ul style="list-style-type: none"> <li>• Weekly first month</li> <li>• Monthly second month through sixth month</li> </ul>

			<ul style="list-style-type: none"> <li>Quarterly thereafter</li> </ul>
Temperature	°F/°C	grab	<ul style="list-style-type: none"> <li>Weekly first month</li> <li>Monthly second month through sixth month</li> <li>Quarterly thereafter</li> </ul>
Groundwater Elevation	Feet, mean sea level (msl) and below ground surface (bgs)	In situ	<ul style="list-style-type: none"> <li>Weekly first month</li> <li>Monthly second month through sixth month</li> <li>Quarterly thereafter</li> </ul>
Dissolved Oxygen	µg/l	grab	<ul style="list-style-type: none"> <li>Weekly first month</li> <li>Monthly second month through sixth month</li> <li>Quarterly thereafter</li> </ul>
Major Anions (bromide, chloride, sulfate, nitrate, nitrite, O-phosphate, and sulfide)	µg/l	grab	<ul style="list-style-type: none"> <li>Weekly first month</li> <li>Monthly second month through sixth month</li> <li>Quarterly thereafter</li> </ul>
Major Cations (barium, calcium, magnesium, manganese, potassium and sodium)	µg/l	grab	<ul style="list-style-type: none"> <li>Weekly first month</li> <li>Monthly second month through sixth month</li> <li>Quarterly thereafter</li> </ul>
Permanganate	µg/l	grab	<ul style="list-style-type: none"> <li>Weekly first month</li> <li>Monthly second month through sixth month</li> <li>Quarterly thereafter</li> </ul>
Color (EPA Method 110.2)	Color unit	grab	<ul style="list-style-type: none"> <li>Weekly first month</li> <li>Monthly second month through sixth month</li> <li>Quarterly thereafter</li> </ul>
Metals in Priority pollutant scan*	µg/L	grab	<ul style="list-style-type: none"> <li>Annually</li> </ul>

\*Priority Pollutants are listed in Attachment A

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.

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.

All records and reports submitted in compliance with this Order are public documents and will be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region, upon request by interested parties. Only proprietary information, and only at the request of the Discharger will be treated as confidential.

Ordered by: \_\_\_\_\_  
Dennis A. Dickerson  
Executive Officer

Date: June 14, 2002