

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

**MONITORING AND REPORTING PROGRAM NO. CI-8685
FOR
ANADITE, INC. FACILITY
10647 GARFIELD AVENUE, SOUTH GATE, CALIFORNIA**

**ORDER NO. R4-2002-0030 (Series No. 043)
FILE NO. 97-019**

I. REPORTING REQUIREMENTS

- A. The Discharger shall implement this monitoring program on the effective date of this enrollment (December 31, 2003) under Regional Board Order No. R4-2002-0030. The first monitoring report under this Program is due by April 15, 2004.

Monitoring reports shall be received by the dates in the following schedule:

| <u>Reporting Period</u> | <u>Report Due</u> |
|-------------------------|-------------------|
| January – March | April 15 |
| April – June | July 15 |
| July – September | October 15 |
| October – December | January 15 |

- 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. The quarterly reports shall contain the following information regarding injection activities:
1. Location Map showing injection/extraction well and monitoring wells
 2. Construction details of the wells
 3. Written summary defining:
 - Depth of injection within the wells;
 - Quantity of amendments injected per injection point;
 - Total amount of amendments injected at each pilot test area; and
 - Verification of amendments injected.

December 31, 2003

- D. All groundwater monitoring reports must include, at minimum, the following:
1. Well identification, date and time of sampling;
 2. Sampler identification, and laboratory identification; and
 3. Quarterly observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.
- E. Within 90 days following the completion of the pilot studies, the Discharger shall submit a final report and remedial action plan (RAP) to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the pilot studies, conclusions regarding the effectiveness of the tested remediation technologies, and recommendations/plans for full-scale implementation of groundwater remediation activities. 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.
- F. 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.

II. GROUNDWATER MONITORING PROGRAM

A groundwater monitoring program shall be designed to detect and evaluate impacts associated with the sodium lactate or potassium permanganate injection activities. The pilot studies will be conducted at three selected areas of the site. Each pilot test area shall have its own monitoring program. The Discharger shall conduct baseline sampling prior to sodium lactate or potassium permanganate solution injection and regular monitoring and sampling with the required frequencies from all monitoring wells at each pilot test area for the specified parameters.

Pilot Test No. 1 Area: The following shall constitute the monitoring program for up-gradient well MW-7, injection well MW-1, application area wells OW-1 and OW-2, and down-gradient well MW-6:

| <u>CONSTITUENT/PARAMETER</u> | <u>UNITS</u> | <u>TYPE OF SAMPLE</u> | <u>MINIMUM FREQUENCY OF MONITORING AND ANALYSIS</u> |
|---|----------------|-----------------------|---|
| Chlorinated Volatile Organic Compounds (EPA Method 8260B) | µg/L | grab | Baseline* and Quarterly |
| Total Organic Carbon | µg/L | grab | Baseline and Quarterly |
| Total Dissolved Solids | mg/L | grab | Baseline and Quarterly |
| Major Anions (bromide, chloride, sulfate, nitrate, nitrite, and o-phosphate, and sulfide) | mg/L | grab | Baseline and Quarterly |
| Major Cations (Calcium, magnesium, potassium, sodium) | mg/L | grab | Baseline and Quarterly |
| Ferrous Iron | µg/L | grab | Baseline and Quarterly |
| Alkalinity | mg/L | grab | Baseline and Quarterly |
| Metabolic Acids (acetic, propionic, pyruvic, butyric and lactic) | µg/L | grab | Baseline and Quarterly |
| Methane, ethane and ethene | µg/L | grab | Baseline and Quarterly |
| Oxidation-Reduction Potential | Millivolts | grab | Baseline and Quarterly |
| Dissolved Oxygen | mg/L | grab | Baseline and Quarterly |
| Groundwater Elevation | Feet (bgs/msl) | In situ | Baseline and Quarterly |
| Temperature | °F/°C | grab | Baseline and Quarterly |
| Specific Conductivity | µmhos/cm | grab | Baseline and Quarterly |
| Turbidity | NTU | grab | Baseline and Quarterly |

*Baseline – Sampling conducted prior to amendment injections

Pilot Test No. 2 Area: The following shall constitute the monitoring program for up-gradient well MW-6, injection well MW-5, application area wells PZ5-1 and PZ5-2, and down-gradient well EW-1:

| <u>CONSTITUENT/PARAMETER</u> | <u>UNITS</u> | <u>TYPE OF SAMPLE</u> | <u>MINIMUM FREQUENCY OF MONITORING AND ANALYSIS</u> |
|---|----------------|-----------------------|---|
| Chlorinated Volatile Organic Compounds (EPA Method 8260B) | µg/L | grab | Baseline and Quarterly |
| Total Organic Carbon | µg/L | grab | Baseline and Quarterly |
| Total Dissolved Solids | mg/L | grab | Baseline and Quarterly |
| Major Anions (bromide, chloride, sulfate, nitrate, nitrite, and o-phosphate, and sulfide) | mg/L | grab | Baseline and Quarterly |
| Major Cations (Calcium, magnesium, potassium, sodium) | mg/L | grab | Baseline and Quarterly |
| Ferrous Iron | µg/L | grab | Baseline and Quarterly |
| Alkalinity | mg/L | grab | Baseline and Quarterly |
| Total Chromium and Hexavalent Chromium | µg/L | grab | Baseline and Quarterly |
| Metabolic Acids (acetic, propionic, pyruvic, butyric and lactic) | µg/L | grab | Baseline and Quarterly |
| Methane, ethane and ethene | µg/L | grab | Baseline and Quarterly |
| Oxidation-Reduction Potential | Millivolts | grab | Baseline and Quarterly |
| Dissolved Oxygen | mg/L | grab | Baseline and Quarterly |
| Groundwater Elevation | Feet (bgs/msl) | In situ | Baseline and Quarterly |
| Temperature | °F/°C | grab | Baseline and Quarterly |
| Specific Conductivity | µmhos/cm | grab | Baseline and Quarterly |
| Turbidity | NTU | grab | Baseline and Quarterly |

Pilot Test No. 3 Area: The following shall constitute the monitoring program for up-gradient well MW-6**, injection well MW-15, application area well OW-3, and down-gradient well OW-4:

| <u>CONSTITUENT/PARAMETER</u> | <u>UNITS</u> | <u>TYPE OF SAMPLE</u> | <u>MINIMUM FREQUENCY OF MONITORING AND ANALYSIS</u> |
|---|----------------|-----------------------|---|
| Chlorinated Volatile Organic Compounds (EPA Method 8260B) | µg/L | grab | Baseline and Bimonthly |
| Total Organic Carbon | µg/L | grab | Baseline and Bimonthly |
| Total Dissolved Solids | mg/L | grab | Baseline and Bimonthly |
| Major Anions (bromide, chloride, sulfate, nitrate, nitrite, and o-phosphate, and sulfide) | mg/L | grab | Baseline and Bimonthly |
| Major Cations (Calcium, magnesium, potassium, sodium) | mg/L | grab | Baseline and Bimonthly |
| Ferrous Iron | µg/L | grab | Baseline and Bimonthly |
| Alkalinity | mg/L | grab | Baseline and Bimonthly |
| Total Chromium and Hexavalent Chromium | µg/L | grab | Baseline and Bimonthly |
| Metabolic Acids (acetic, propionic, pyruvic, butyric and lactic) | µg/L | grab | Baseline and Bimonthly |
| Methane, ethane and ethene | µg/L | grab | Baseline and Bimonthly |
| Oxidation-Reduction Potential | Millivolts | grab | Baseline and Bimonthly |
| Dissolved Oxygen | Mg/L | grab | Baseline and Bimonthly |
| Groundwater Elevation | Feet (bgs/msl) | In situ | Baseline and Bimonthly |
| Temperature | °F/°C | grab | Baseline and Bimonthly |
| Specific Conductivity | µmhos/cm | grab | Baseline and Bimonthly |
| Turbidity | NTU | grab | Baseline and Bimonthly |

**Well MW-6 can be monitored and sampled quarterly since it is utilized as an up-gradient well for both of the pilot test 2 and 3 areas.

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)"

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: _____
Dennis A. Dickerson
Executive Officer

Date: December 31, 2003