California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. R1-2007-0049
WDID No. 1B04116RSON

[Rescinding and Replacing Monitoring and Reporting Program Order R1-2005-0100]

FOR

(Former) Marlow Center One-Hour Martinizing
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This Monitoring and Reporting Program Order rescinds and replaces Order R1-2005-0100 and all previous Regional Water Board issued monitoring and reporting directives for the (Former) Marlow Center One-Hour Martinizing site.

GROUNDWATER MONITORING

1. Prior to purging each monitoring well for sampling, the depth to groundwater shall be measured to the nearest 0.01-foot. The groundwater elevations for each monitoring event shall be reported in tabular form indicating the top of casing elevation, the groundwater elevation referenced to mean sea level and the actual depth to groundwater.

2. Prior to purging, groundwater from monitoring wells MW-3, MW-6, MW-7, OS-13, and OS-17 shall be tested for the following parameters: oxidation-reduction potential, pH, temperature, and dissolved oxygen. These field tests shall be conducted so that the test results represent water quality at the depth of the well screens.

3. Prior to sampling, groundwater monitoring wells shall be purged of at least three wetted well-casing volumes of water. If a well goes dry before three well-casing volumes have been removed, then the well shall be sampled after it has recovered 80% of the initial wetted casing volume.

4. Groundwater samples from wells MW-3, and MW-7 shall be analyzed at least one time for the following dissolved constituents of concern: aluminum, antimony, beryllium, cobalt, iron, manganese, mercury, nickel, silver, thallium, zinc; and bromide. Analyses for these dissolved metals shall be performed on samples collected during the first quarterly monitoring event conducted under this Order.

5. Groundwater samples from wells MW-3, MW-6, MW-7, OS-13, and OS-17 shall analyzed quarterly for the following oxidation-sensitive constituents of concern:

   a. Dissolved metals:, arsenic, barium, cadmium, total chromium, hexavalent chromium , cobalt, copper, lead, molybdenum, selenium, vanadium, and uranium;

   b. Inorganic compounds: dissolved carbon dioxide, and bromate;

   c. Total dissolved solids, and chemical oxygen demand.

6. Groundwater samples from monitoring wells MW-2, MW-4, MW-5, MW-6, OS-13, OS-17, and OS-18 shall be analyzed quarterly for the full scan of volatile organics compounds quantified by EPA Method 8260.

7. Groundwater samples from monitoring wells MW-1B, MW-2B, MW-3, MW-3B, and MW-7, and MW-8 shall be analyzed annually during the first calendar quarter for the full scan of volatile organics compounds quantified by EPA Method 8260.

8. All laboratory analyses must be performed by a laboratory certified for those analyses by the State of California Department of Health Services.

9. Analytical methods for sample analyses shall achieve practical quantification reporting limits that are adequate for evaluating regulatory action levels for each constituent. A table of water quality objectives and common laboratory reporting limits for the constituents of concern is incorporated in this Monitoring and Reporting Program Order as Exhibit A.

REPORTING

10. Groundwater monitoring reports shall be submitted to the North Coast Regional Water Quality Control Board at 5550 Skylane Boulevard, Suite A, Santa Rosa, California, 95403 according to the following schedule:

Quarter	Reporting Period	Required Submittal Date
First Quarter	January, February, March	April 30th
Second Quarter	April, May, June	July 31st
Third Quarter	July, August, September	October 31st
Fourth Quarter	October, November, December	January 30th

11. Groundwater monitoring data and reports shall also be submitted electronically to the State Water Resources Control Board's Geographic Environmental Information Management System database (GeoTracker) as required by Title 23, Division 3, Chapter 30, Article 2, Sections 3890-3895 of the California Code of Regulations).

12. Groundwater monitoring reports shall include the following elements:

    a. A narrative description of the work conducted;

    b. An accurately scaled site plan showing all structures and other significant site features, including the locations of monitoring wells, remediation system sparge points and vapor extraction wells;

    c. A groundwater elevation map for each sampling event;

    d. Analytical data tables including both current and historical analytical results;

    e. Field instrument calibration records and protocols;

    f. Copies of the well purging and sampling field logs; chain of custody documents; and signed laboratory reports including quality control data and explanations of analytical anomalies, if any. These supporting documents may be included as appendices to the report.

    g. A table summarizing soil vapor extraction system (SVE) operational data shall be submitted. The table shall present the soil vapor treatment system influent and effluent analytical results, the volume of soil vapor extracted, and the cumulative contaminant mass removed. Copies of monitoring reports prepared for compliance with the Bay Area Air Quality Management District permit shall also be submitted to the Regional Water Board.

Ordered by Catherine Kuhlman

Catherine E. Kuhlman
Executive Officer

June 28, 2007

Monitoring and Reporting Program R1-2005-0049
Table of VOCs and ORP Sensitive Chemicals

CHEMICAL	Common Minimum Detection Level	WATER QUALITY OBJECTIVE [1]	WATER QUALITY OBJECTIVE CITATION
Bromate	**5 µg/l**	**10 µg/l**	**Primary MCL** US EPA
Bromide[2]	**100 µg/l**	**2300 µg/l**	**Suggested No Adverse Response Levels** National Academy of Sciences
1,1-Dichloroethane	**<0.5 µg/l**	**3 µg/l ***	**California Public Health Goal (Cal/EPA, OEHHA)**
1,2-Dichloroethane	**<0.5 µg/l**	**0.4 µg/l**	**California Public Health Goal (Cal/EPA, OEHHA)**
1,1-Dichloroethene	**<0.5 µg/l**	**0.06 µg/l**	**USEPA Health Advisory**
cis-1,2-Dichloroethene	**<0.5 µg/l**	**6 µg/l**	**Primary MCL** California Dept of Health Services
trans-1,2-Dichloroethene	**<0.5 µg/l**	**10 µg/l**	**Primary MCL** California Dept of Health Services
1,1,1-Trichloroethane	**<0.5 µg/l**	**17 µg/l**	**One-in-a-Million Incremental Cancer Risk Estimates for Drinking Water** National Academy of Sciences
1,1,2-Trichloroethane	**<0.5 µg/l**	**0.5µg/l**	Cal/EPA Cancer Potency Factor
Trichloroethene	**<0.5 µg/l**	**0.8 µg/l**	**California Public Health Goal** (Cal/EPA, OEHHA)
Tetrachloroethene	**<0.5 µg/l**	**0.06 µg/l**	**California Public Health Goal** (Cal/EPA, OEHHA)
Vinyl Chloride	**<0.5 µg/l**	**0.05 µg/l**	**California Public Health Goal** (Cal/EPA, OEHHA)
Uranium (U)	**1 µg/l**	**0.5 µg/l**	**California Public Health Goal or PHG**
Hexavalent Chromium (Cr)	**5 µg/l**	**21 µg/l**	**USEPA IRIS Reference Dose (RfD) as a drinking water level**
Lead (Pb)	**0.5 µg/l**	**2 µg/l**	**California Public Health Goal or PHG**
Molybdenum (Mo)	**3 µg/l**	**35 µg/l**	**USEPA IRIS Reference Dose (RfD) as a drinking water level**
Selenium (Se)	**5 µg/l**	**35 µg/l**	**USEPA IRIS Reference Dose (RfD) as a drinking water level**
Vanadium (V)	**50 µg/l**	**50 µg/l**	**California State Action Levels (Department of Health Services)**

[1] The California Water Code, and regulations and policies developed thereunder require cleanup and abatement of discharges and threatened discharges of waste to the extent feasible. Cleanup and abatement activities are to provide attainment of background levels of water quality or the highest water quality that is reasonable if background levels of water quality cannot be restored. **Alternative cleanup levels less stringent than background concentration shall be permitted only if the discharger demonstrates that: it is not feasible to attain background levels**; the alternative cleanup levels are consistent with the maximum benefit to the people of the State; alternative cleanup levels will not unreasonably affect present and anticipated beneficial uses of such water; and they will not result in water quality lower than prescribed in the Basin Plan and Policies adopted by the State and Regional Water Boards.

[2] Bromide is a naturally occurring constituent analyzed to identify its presence as a potential precursor for the formation of bromate under oxidative conditions. A minimum detection level of 100 µg/l is required.