

California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. R1-2009-0117
WDID No. 1B04116RSON

[Rescinding and Replacing Monitoring and Reporting Program Order R1-2007-0049]

FOR

(Former) Marlow Center One-Hour Martinizing
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This Monitoring and Reporting Program Order rescinds and replaces Order No. R1-2007-0049 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, MW-5, and MW-6 shall analyzed semi-annually, during the first and third calendar quarters, for the following oxidation-sensitive constituents of concern: dissolved total chromium, dissolved hexavalent chromium, and bromate.

5. Groundwater samples from monitoring wells MW-2, MW-4, MW-5, MW-6, and OS-18 shall be analyzed quarterly for the full scan of volatile organics compounds quantified by EPA Method 8260.
6. Groundwater samples from monitoring wells MW-1B, MW-2B, MW-3, MW-3B, 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.
7. All laboratory analyses must be performed by a laboratory certified for those analyses by the State of California Department of Health Services.
8. 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

9. 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:

| <u>Quarter</u> | <u>Reporting Period</u> | <u>Required Submittal Date</u> |
|----------------|-----------------------------|--------------------------------|
| 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 31st |

10. 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).
11. 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
Executive Officer

October 26, 2009

Monitoring and Reporting Program R1-2009-0117 Table of Selected VOCs and ORP Sensitive Chemicals

| CHEMICAL | COMMON PRACTICAL QUANTITATION LIMIT | WATER QUALITY OBJECTIVE ¹ | WATER QUALITY OBJECTIVE CITATION |
|--------------------------|-------------------------------------|--------------------------------------|---|
| Bromate | 5 µg/l | 10 µg/l | Primary MCL US EPA |
| 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 | US EPA Health Advisory applied to the GENERAL water quality objective in the Basin Plan |
| 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 | 0.3µg/l | California Public Health Goal (Cal/EPA, OEHHA) |
| Trichloroethene | <0.5 µg/l | 1.7 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) |
| Chromium, Total | < 2.0 µg/l | 50 µg/l | US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan |
| Hexavalent Chromium | 5 µg/l | 21 µg/l | US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan |

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.