

California Regional Water Quality Control Board
North Coast Region

Monitoring and Reporting Program Order No. R1-2009-0075

FOR

SHELL OIL PRODUCTS US

2575 Corby Avenue

APN 043-053-032

Santa Rosa, CA

Sonoma County

This Monitoring and Reporting Program Order (Order) is issued pursuant to California Water Code Section (CWC) 13267(b) and requires monitoring of groundwater and submission of technical reports. This Order replaces all previously issued groundwater monitoring directives issued for the site. The objective of monitoring conducted under this Order is to provide the Discharger and the Regional Water Board with information concerning groundwater quality and contaminant trends at the site.

All monitoring and reporting activities shall be conducted by or under the supervision of a California Registered Engineer or Geologist. Under the authority of CWC section 13267, the Discharger named above is required to comply with the following:

MONITORING

1. The depth to groundwater shall be determined to the nearest 0.01 foot prior to well purging and sampling in all monitoring wells at the site. The data generated from the elevation readings must be referenced to the same elevation datum used for the electronic GeoTracker survey values.
2. Monitoring wells MW-1R, MW-6R, MW-7, MW-11, MW-13, and MW-20 through MW-29 shall be sampled and analyzed semi-annually, during the first and third calendar quarters, for the following constituents of concern:
 - a. Total Petroleum Hydrocarbons measured as gasoline (TPH-G);
 - b. Methyl tertiary butyl ether (MTBE); and
 - c. Tert-butyl alcohol (TBA).
3. Monitoring wells MW-8 shall be sampled and analyzed semi-annually, during the first and third calendar quarters, for MTBE and TBA only.

4. Monitoring wells MW-12 shall be sampled and analyzed semi-annually, during the first and third calendar quarters, for TPH-G, MTBE and TBA only.
5. Monitoring wells MW-4, MW-17, MW-19, V-11, V-13, V-14 shall be sampled and analyzed annually, during the first calendar quarter, for MTBE and TBA only.
6. All chemical analyses must be performed by a laboratory certified by the State of California Department of Health Services for those analyses.
7. 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 common laboratory reporting limits for the constituents of concern is incorporated in this Order as Attachment A.

REPORTING

1. Laboratory reports shall be submitted in electronic data format to the State Water Resources Control Board's Geographic Environmental Information Management System database (GeoTracker)¹ within forty-five days of the sample collection.
2. Semi-annual monitoring reports shall be submitted in paper format 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>Report</u>	<u>Reporting Period</u>	<u>Required Submittal Date</u>
First Semi-Annual Report	October through March	April 30th
Second Semi-Annual Report	April through September	October 31 st

3. Groundwater monitoring reports for each monitoring event shall include the following elements:
 - a. A narrative description of the work conducted.
 - b. A groundwater elevation map for each water-bearing zone monitored.
 - c. A contaminant distribution map showing analytical results for TPH-G, MTBE, and TBA at the respective sample locations. The contaminant distribution data may be presented on the groundwater elevation maps for that sampling event.
 - d. Analytical data tables presenting both current and historical analytical results;
 - e. 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.

¹ Information on GeoTracker submittal requirements can be found at http://www.waterboards.ca.gov/ust/electronic_submittal/index.shtml

4. Laboratory data, copies of monitoring reports, and depth to groundwater measurements shall also be submitted electronically to the Geotracker database.

Ordered by _____
Catherine Kuhlman
Executive Officer

July 30, 2009

Attachment A

Table of Water Quality Objectives

For Selected Petroleum Related Constituents in Groundwater

Updated May 2009

CHEMICAL	PRACTICAL QUANTITATION LIMIT ²	WATER QUALITY OBJECTIVE ¹	WATER QUALITY OBJECTIVE CITATION
Petroleum Hydrocarbons (as gasoline)	50.0 µg/l	5 µg/l	Published literature provides a taste and odor threshold of 5 ug/l which is applied to the narrative TASTE AND ODOR water quality objective of the Basin Plan
Petroleum Hydrocarbons (as diesel)	50.0 µg/l	100 µg/l	US EPA health advisory of September 4, 1992, Suggested No Adverse Response Level (SNARL) applied to TASTE AND ODOR water quality objective in the Basin Plan
Petroleum Hydrocarbons (as motor oil)	50.0 µg/l	50.0 µg/l	US EPA health advisory Suggested No Adverse Response Level (SNARL) of 0.1 ug/l to 1.0 ug/l applied to GENERAL water quality objective in the Basin Plan
Benzene	0.5 µg/l	0.15 µg/l	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Toluene	0.5 µg/l	42 µg/l	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Ethyl benzene	0.5 µg/l	3.2 µg/l	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Xylenes	0.5 µg/l	17 µg/l	US EPA National Ambient Water Quality Criteria, Human Health and Welfare Protection applied to TASTE AND ODOR water quality objective in the Basin Plan
Methyl tertiary butyl ether	0.5 µg/l	5 µg/l	California Department of Health Services Secondary Maximum Contaminant Level applied to the TASTE and ODOR water quality objective in the Basin Plan
Tert-butyl alcohol	10 µg/l	12 µg/l	California Notification Levels (Department of Health Services) Carcinogen; limit based on cancer risk.

¹ The California Water Code, and regulations and policies developed there under 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. (State Water Resources Control Board Resolutions Nos. 68-16 and 92-49).

Water quality objectives in the Basin Plan are adopted to ensure protection of the beneficial uses of water. The Basin Plan provides that "whenever several different objectives exist for the same water quality parameter, the strictest objective applies". Accordingly, the most stringent water quality objectives for protection of all beneficial uses are selected as the protective water quality criteria. Alternative cleanup and abatement actions must evaluate the feasibility of, at a minimum: (1) cleanup to background levels, (2) cleanup to levels attainable through application of best practicable technology, and (3) cleanup to protective water quality criteria levels.

² Practical quantitation limits are based on current technology. For instances where technology cannot achieve the water quality objective the practical quantitation limit will be used.