

California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM R1-2011-0087

For

Union Pacific Railroad
99 Frances Street
Santa Rosa, California
Sonoma County

This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code Section 13267(b). The MRP provides specific requirements to monitor the groundwater pump and treat system influent, effluent, and receiving water to demonstrate compliance with Waste Discharge Requirements Order No. R1-2011-0028 (Order). This Order is a National Pollution Discharge Elimination System (NPDES) *General Permit for Discharges of Highly Treated Groundwater to Surface Waters Following Extraction and Treatment of Groundwater Polluted with Petroleum Hydrocarbons and Volatile Organic Compounds.*

TREATMENT SYSTEM MONITORING

Monitoring Locations

1. Treatment System Influent-M-INF – Untreated groundwater at a point in the groundwater collection system immediately prior to treatment.
2. Discharge Point 001 – M-001 - Treated effluent after treatment and before contact with the receiving water and/or dilution by any other water or waste.
3. Receiving Water 001 – R-001 – Receiving water at an appropriate monitoring location upstream of the point of discharge that adequately represents upstream water quality.
4. Receiving Water 002 – R-002 – Receiving water at an appropriate monitoring location downstream of the point of discharge that adequately represents downstream water quality.

Influent Monitoring

1. The Discharger shall monitor untreated groundwater/influent to the treatment facility at monitoring location M-INF in accordance with the following schedule:

Parameter	Frequency
Flow	Continuous
Temperature	Monthly
pH	Monthly
Dissolved Oxygen	Semi-Annually

Parameter	Frequency
Full Scan Volatile Organic Compounds by 8260B	Monthly
Total petroleum hydrocarbons as gasoline	Monthly
Total petroleum hydrocarbons as diesel	Monthly
Benzo(a)pyrene	Monthly
Benzo(ghi)perylene	Monthly
Mercury	Monthly

Effluent-M-001

2. The Discharger shall monitor treated effluent at monitoring location M-001 in accordance to the following schedule:

Parameter	Frequency
Flow	Continuous
Temperature	Monthly
pH	Monthly
Dissolved Oxygen	Semi-Annually
Full Scan Volatile Organic Compounds by 8260B	Monthly
Total Petroleum Hydrocarbons as Gasoline	Monthly
Total Petroleum Hydrocarbons as Diesel	Monthly
Benzo(a)pyrene	Monthly
Benzo(ghi)perylene	Monthly
Mercury	Monthly
Acute Toxicity	Annually
Chronic Toxicity	Annually

Receiving Water-R-001 and R-002

3. Receiving water sampling shall be performed when water is present with a flow rate of at least 0.1 cubic feet per second. Monthly inspections of the receiving water shall be conducted to verify the presence or absence of water.
4. When receiving water is determined to have an appropriate flow rate for the collection of representative samples, the Discharger shall monitor receiving water at R-001 and R-002 according to the following schedule.

Parameter	Frequency
Flow	Monthly
Temperature	Monthly
pH	Monthly
Dissolved Oxygen	Semi-Annually
Turbidity	Monthly
Mercury	Monthly

REPORTING

1. Self monitoring reports (SMRs) shall be submitted as hard copies to the Regional Water Board in accordance with the following schedule:

Reporting Period	Due Date
1 st and 2 nd Quarter (January, February, March, April, May, June)	August 1
3 rd and 4 th Quarter (July, August, September, October, November, December)	February 1

2. All monitoring reports and data shall also be electronically submitted to the State Water Resources Control Board's Geographic Environmental Information Management System database (GeoTracker) as required by Title 23, Division 3, Chapter 16, Article 12 of the California Code of Regulations.

Ordered by _____

Catherine Kuhlman
Executive Officer

August 10, 2011