

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM ORDER NO. R5-2008-XXXX

FOR
COUNTY OF SHASTA
FOR OPERATION OF
REDDING REGIONAL SEPTAGE DISPOSAL FACILITY
SHASTA COUNTY

Monitoring and Reporting Program Order No. R5-2008-XXXX is issued pursuant to Water Code section 13267, which authorizes the Regional Water Board to require submittal of technical and monitoring reports. Compliance with this Monitoring and Reporting Program, and with the companion Standard Provisions and Reporting Requirements, is ordered by Waste Discharge Requirements Order No. R5-2008-XXXX. Failure to comply with this Program, or with the Standard Provisions and Reporting Requirements dated March 1991, constitutes noncompliance with the WDRs and with the Water Code, which can result in the imposition of civil monetary liability.

A. REPORTING

This Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required in the Standard Provisions and Reporting Requirements. Reports, which do not comply with the required format, will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the WDRs. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with Waste Discharge Requirements or the lack thereof. Historical and current monitoring data shall be graphed at least once annually. A short discussion of the monitoring results, including notations of any water quality violations shall precede the tabular summaries. Data shall also be submitted in a digital format acceptable to the Executive Officer

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those, which cannot be quantified and/or specifically identified. Field and laboratory tests shall be reported in the quarterly monitoring reports. The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Regional Water Board.

B. REQUIRED MONITORING REPORTS AND SUBMITTAL DATES

All monitoring reports shall include observations and water quality data collected during the reporting period and submitted per the **Reporting Due Dates** of this Monitoring and Reporting Program.

1. Reporting Due Dates

The Discharger shall submit an Annual Monitoring Summary Report to the Board, **by 1 February** covering the previous monitoring year.

Table 1 – Report Submittal Dates		
Reporting Type	Reporting Period	Report Date Due
Quarterly	1 January – 31 March	30 April
	1 April – 30 June	31 July
	1 July – 30 September	31 October
	1 October – 31 December	1 February
Semiannually	1 January – 30 June	31 July
	1 July – 31 December	1 February

2. Monitoring Parameters

Monitoring parameters are constituents of concern that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from an impoundment. The monitoring parameters for all impoundments are those listed in Tables 2 through 5 for the specified monitored medium.

3. Concentration Limits

For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method such as an analysis of variance (ANOVA); or
- b. By an alternate statistical method acceptable to the Executive Officer to verify that there is “measurably significant” evidence of a release from the wastewater surface impoundments.

4. Point of Compliance

The point of compliance for the water standard is a vertical surface located at the hydraulically downgradient limit of the impoundments that extends through the uppermost aquifer underlying the Facility.

5. Response to a Release

If the Discharger determines that there is significant statistical evidence of a release (i.e. the initial statistical comparison or non-statistical comparison indicates, for any Constituent of Concern or Monitoring Parameter, that a release is tentatively identified), the Discharger shall immediately notify the Board verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved, shall provide written notification by certified mail within seven days of such determination.

C. MONITORING

All point of compliance monitoring wells established for the detection monitoring program shall constitute the monitoring points for the groundwater Water Quality Protection Standard. All detection monitoring program groundwater monitoring wells,

unsaturated zone monitoring devices, leachate, and surface water monitoring points shall be sampled and analyzed for monitoring parameters and constituents of concern as indicated and listed in Tables 2 through 4.

The Discharger may, with the approval of the Executive Officer, use alternative analytical test methods, including new USEPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this Monitoring and Reporting Program.

1. Waste Discharge Monitoring

The Discharger shall monitor all wastes discharged to surface impoundments on a **monthly** basis and report the results in the **quarterly** Detection Monitoring Reports:

Table 2 - Waste Discharge Monitoring		
Parameters	Units	Frequency
Quantity Discharged	gallons	Monthly

2. Surface Impoundment

Surface water samples shall be collected from the surface impoundments according to the following schedule:

Table 3 - Surface Impoundment Monitoring		
Field Parameter	Units	Frequency
Freeboard	Feet & Tenths	Monthly
Temperature	°C	Quarterly
Dissolved Oxygen	mg/L	Quarterly
Specific Conductance	µmhos/cm	Quarterly
pH	pH scale	Quarterly
Monitoring Parameters		
Total Dissolved Solids	mg/L	Semiannually
Total Suspended Solids	mg/L	Semiannually
Chemical Oxygen Demand	mg/L	Semiannually
Biological Oxygen Demand	mg/L	Semiannually
Volatile Organic Compounds (EPA Method 8260)	µg/L	Annually
Chloride	mg/L	Semiannually
Sulfate	mg/L	Semiannually
Nitrate – Nitrogen	mg/L	Semiannually
Total Kjeldahl Nitrogen (TKN)	mg/L	Semiannually
Metals CAM (17)	mg/L	Annually

3. Groundwater

Groundwater samples shall be collected from the point-of-compliance wells,

background wells, and any additional wells added as part of the approved groundwater monitoring system. Samples shall be collected and analyzed for the monitoring parameters in accordance with the methods and frequency specified in Table 4. The Discharger shall determine the groundwater flow rate and direction in the uppermost aquifer and in any zones of perched water and in any additional zone of saturation monitored pursuant to this Monitoring and Reporting Program, and report the results semiannually, including the times of highest and lowest elevations of the water levels in the wells.

The first major groundwater unit is encountered approximately 300 feet below ground surface. Four, 4-inch diameter, groundwater monitoring wells (MW-1 through MW-4) were completed in Summer 2005. Soil borings also identified perched groundwater at 69 feet below ground surface; however this perched zone appeared to be discontinuous.

Hydrographs of each well shall be submitted showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted **annually**.

Table 4 - Groundwater Monitoring		
<u>Field Parameter</u>	<u>Units</u>	<u>Frequency</u>
Groundwater Elevation	Ft., & hundredths, MSL	Quarterly
Temperature	°C	Semiannually
Dissolved Oxygen	mg/L	Semiannually
Specific Conductance	µmhos/cm	Semiannually
pH	pH number	Semiannually
<u>Monitoring Parameters</u>		
Total Dissolved Solids	mg/L	Semiannually
Volatile Organic Compounds (EPA Method 8260)	µg/L	Annually
Chloride	mg/L	Semiannually
Sulfate	mg/L	Semiannually
Nitrate – Nitrogen	mg/L	Semiannually
Total Kjeldahl Nitrogen (TKN)	mg/L	Semiannually
Metals CAM (17)	mg/L	Annually

4. Unsaturated Zone Monitoring

The Discharger shall collect, preserve, and transport samples in accordance with the quality assurance/quality control standards contained in an approved Sample Collection and Analysis Plan.

Unsaturated zone samples shall be collected from the monitoring devices and background monitoring devices of the approved unsaturated zone monitoring

system. The collected samples shall be analyzed for the listed constituents in accordance with the methods and frequency specified in Table 5. All monitoring parameters shall be graphed so as to show historical trends at each monitoring point.

The unsaturated zone monitoring network consists of four suction lysimeters (L-1 through L-4), constructed to a total depth of 30 feet below ground surface.

Unsaturated zone monitoring reports shall be included with the corresponding semiannual groundwater monitoring and shall include an evaluation of potential impacts of the facility on the unsaturated zone.

Table 5- Unsaturated Zone Monitoring		
<u>Field Parameter</u>	<u>Units</u>	<u>Frequency</u>
Sample volume	mL	Semiannually
Temperature	°C	Semiannually
Specific Conductance	µmhos/cm	Semiannually
pH	pH number	Semiannually
<u>Monitoring Parameters</u>		
Total Dissolved Solids	mg/L	Semiannually
Volatile Organic Compounds (EPA Method 8260)	µg/L	Annually
Chloride	mg/L	Semiannually
Sulfate	mg/L	Semiannually
Nitrate – Nitrogen	mg/L	Semiannually
Total Kjeldahl Nitrogen (TKN)	mg/L	Semiannually
Metals CAM (17)	mg/L	Annually

5. Facility Monitoring

a. Facility Inspection

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall include pond liners and leak detection monitoring sumps and assess potential damage to the ponds, drainage control system, groundwater monitoring equipment (including wells, etc.), and shall include the Standard Observations contained in section F.4.f. of Standard Provisions and Reporting Requirements. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. The Discharger shall submit results of the inspection and the repair measures implemented, including photographs of the problem and the repairs with the annual monitoring report.

b. Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage **within 7 days** following *major storm events*. Necessary repairs shall be completed **within 30 days** of the inspection. The Discharger shall report any damage and subsequent repairs within 45 days of completion of the repairs, including photographs of the problem and the repairs.

The Discharger shall implement the above monitoring program on the effective date of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

Date

KB/KLC: sae