

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. 96-137
FOR
SUTTER COUNTY PUBLIC WORKS DEPARTMENT
ROBBINS WASTEWATER TREATMENT FACILITY
SUTTER COUNTY

This revised Monitoring and Reporting Program (MRP) describes requirements for monitoring the wastewater treatment facility (WWTF) influent, effluent, wastewater ponds, and groundwater. This MRP is issued pursuant to Water Code Section 13267 and replaces MRP No. 96-137, which was adopted by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) on 3 May 1996. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

Central Valley Water Board staff shall approve specific sampling locations prior to any sampling activities. All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test dissolved oxygen, pH, and electrical conductivity) may be used provided that:

1. The user is trained in proper use and maintenance of the instruments;
2. Instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

WWTF INFLUENT MONITORING

The Discharger shall monitor influent wastewater in accordance with the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow	GPD	Flow Meter Observation	Twice Weekly	Monthly

GPD denotes Gallons Per Day

WWTF EFFLUENT MONITORING

The Discharger shall monitor effluent wastewater in accordance with the following. Effluent samples shall be collected just prior to discharge into the wastewater disposal ponds. A grab sample from the discharge pipe within the pond that is currently in use shall be considered representative. Effluent monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
pH	Std Units	Grab	Weekly	Monthly
BOD ¹	mg/L	Grab	Monthly	Monthly
Electrical Conductivity	umhos/cm	Grab	Monthly	Monthly
Total nitrogen	mg/L	Grab	Monthly	Monthly
Total dissolved solids	mg/L	Grab	Quarterly	Monthly ²
Sodium	mg/L	Grab	Quarterly	Monthly ²
Chloride	mg/L	Grab	Quarterly	Monthly ²

¹ Five-day, 20° Celsius biochemical oxygen demand.

² Results shall be reported in the Monthly Monitoring Report for the month during which samples were obtained.

WWTF POND MONITORING

The Discharger shall monitor all ponds at the WWTF in accordance with the following. Samples shall be collected from permanent monitoring locations that will provide samples representative of the wastewater in each pond. Freeboard shall be measured vertically from the water surface to the lowest elevation of the pond berm, and shall be measured to the nearest 0.10 feet. Pond monitoring shall include, at a minimum, the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Freeboard	0.1 Feet	Staff Gauge Observation	Weekly	Monthly
Dissolved Oxygen ^{1, 2}	mg/L	Grab	Weekly	Monthly
pH ²	pH units	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Pond berm condition	--	Observation	Weekly	Monthly

¹ Samples shall be collected opposite each pond inlet at a depth of one foot between 0700 and 0900 hours.

² Sampling is required only when the water depth is greater than one foot.

FACILITY INSPECTIONS

The Discharger shall inspect the WWTF at least weekly. At a minimum, the inspection shall include the following elements:

- a. Condition of fences designed to prevent public access (weekly).
- b. Odors discernible at the property boundary (weekly).
- c. Integrity of all berms, dikes, and levees, including consideration of damage from erosion, wave action, and burrowing rodents (weekly).
- d. Flow metering system function (weekly).
- e. Piping systems, including control valves and visible piping (weekly).
- f. Sand filters for the presence of surfacing wastewater (weekly).
- g. Exterior wastewater pond berms and groundwater monitoring wells for the presence of ponded irrigation water from adjacent properties (weekly).

GROUNDWATER MONITORING

The Discharger shall establish a quarterly sampling schedule for groundwater monitoring, with samples obtained approximately every three months.

Effective immediately, the groundwater sampling and analysis requirements apply to monitoring wells MW-1, MW-2, MW-3, and MW-4. Groundwater elevation data shall be obtained from **all** wells quarterly to determine the groundwater gradient and flow direction.

Any additional wells constructed after issuance of this MRP shall be included in the monitoring well network as of the date of construction. Prior to construction of any additional groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for review and approval. Once installed, all new monitoring wells shall be added to the MRP, and shall be sampled and analyzed according to the schedule below.

Prior to well purging, groundwater elevations shall be measured. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to determine groundwater gradient and direction of flow. The monitoring wells shall be purged of at least three well volumes or until temperature, pH, and electrical conductivity have stabilized. Samples shall be collected and analyzed using approved EPA methods. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Depth to groundwater	0.01 feet	Measurement	Semi- Annual	Semi- Annual
Groundwater elevation ¹	0.01 feet	Calculated	Semi- Annual	Semi- Annual
Gradient	feet/feet	Calculated	Semi- Annual	Semi- Annual
Gradient direction	Degrees	Calculated	Semi- Annual	Semi- Annual
pH	pH units	Grab	Semi- Annual	Semi- Annual
Electrical Conductivity	µmhos/cm	Grab	Semi- Annual	Semi- Annual
Nitrate nitrogen	mg/L	Grab	Semi- Annual	Semi- Annual
Ammonia nitrogen	mg/L	Grab	Semi- Annual	Semi- Annual
Total Kjeldahl nitrogen	mg/L	Grab	Semi- Annual	Semi- Annual
Total coliform organisms ²	MPN/100 ml	Grab	Semi- Annual	Semi- Annual
Standard minerals ³	mg/L	Grab	Semi Annual	Semi-Annual

¹ Groundwater elevations shall be determined based on depth-to-water measurements using a surveyed elevation reference point on the well casing.

² Using a minimum of 15 tubes or three dilutions

³ Standard Minerals shall include, at a minimum, the following elements/compounds: calcium, chloride,, magnesium, , potassium, sodium, sulfate.

⁴ Semi-Annual samples shall be collected twice per year.

⁵ Results for constituents analyzed annually shall be reported in the fourth quarterly monitoring report each year.

⁶ Sampling frequency may be reduced to annually after two years (four consecutive semi-annual sampling events) of monitoring has been completed.

WATER SUPPLY MONITORING

The Discharger shall monitor the community water supply wells as required by the California Department of Public Health and shall submit a copy of the Consumer Confidence Report in the Annual Monitoring Report.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., influent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Central Valley Water Board.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Central Valley Water Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). Such reports shall bear the certification and signature of the Discharger's authorized representative.

At a minimum, the monthly monitoring reports shall include:

1. Results of the following monitoring:
 - a. WWTF influent monitoring;
 - b. WWTF effluent monitoring;
 - c. WWTF pond monitoring; and
 - d. Facility Inspection
2. A facility repair report. The report shall include the name of the person conducting the inspections, dates of inspection, problems identified, repairs recommended, repairs completed, and dates of completion.
3. A comparison of monitoring data to the discharge specifications, disclosure of any violations of the WDRs, and an explanation of any violation of those requirements. Data shall be presented in tabular format.
4. Copies of current calibration logs for all field test instruments.
5. If requested by staff, copies of laboratory analytical report(s).

B. Semi-Annual Monitoring Reports

The Discharger shall submit semi-annual monitoring reports to the Central Valley Water Board by the **1st day of the second month after the reporting period** (i.e. the January-June semi-annual report is due by August 1st) each year.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Quarterly Monitoring Reports shall be prepared under the direct supervision of a registered Professional Engineer or Geologist and signed by the registered professional.

The Semi-Annual Monitoring Report shall include the following:

1. Results of groundwater monitoring.
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to

verify compliance with the WDRs, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged.

3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends, if any.
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements.
6. Summary data tables of historical and current water table elevations and analytical results.
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum.
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be submitted to the Central Valley Water Board by **1 February** each year and shall include the following:

1. Analytical results for all annual monitoring.
2. A copy of the Consumer Confidence Report for the community water supply.
3. If requested by staff, tabular and graphical summaries of all data collected during the year.
4. An evaluation of the performance of the WWTF, including discussion of capacity issues, infiltration and inflow (I/I), nuisance conditions, and a forecast of the flows anticipated in the next year.
5. An evaluation of the groundwater quality beneath the wastewater treatment facility.
6. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
7. A discussion of any data gaps and potential deficiencies/redundancies in the

