

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. 87-190  
FOR

NEVADA COUNTY SANITATION DISTRICT NO. 1  
NORTH SAN JUAN WASTEWATER FACILITY  
NEVADA COUNTY

This monitoring and reporting program (MRP) incorporates requirements for the monitoring of the community leachfield system pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All wastewater samples should be representative of the volume and nature of the discharge. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Process wastewater flow monitoring shall be conducted continuously using a flow meter and shall be reported in cumulative gallons per day.

Field test instruments (such as pH and dissolved oxygen) may be used provided that:

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

**SEPTIC TANK SOLIDS MONITORING**

The Discharger shall monitor the septic tanks and report this information in the annual reports. Septic tanks shall be inspected annually for the presence of sludge in the second compartment of each septic tank. If sludge is encountered, then the septic tank shall be inspected as described in the table below. In addition, the first compartment of each tank shall be monitored as described below once every three years, even if no sludge is encountered in the second compartment.

<u>Parameter</u>	<u>Units</u>	<u>Type of Measurement</u>	<u>Minimum Inspection</u>	<u>Reporting Frequency</u>
Sludge depth and scum thickness in the first compartment of each septic tank <sup>1</sup>	Feet	Staff Gauge	Annually	Annually
Distance between bottom of scum layer and bottom of outlet device <sup>1</sup>	Inches	Staff Gauge	Annually	Annually

Distance between top of sludge layer and bottom of outlet device	Inches	Staff Gauge	Annually	Annually
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<sup>1</sup> The Discharger shall visually inspect the tanks for signs of damages and leakage.

The Discharger shall retain records of each inspection, noting the date and measured readings and calculations. The Discharger will also record when cleaning is required, the condition of the tank, and the date that cleaning or repair occurred and by whom. Copies of the Liquid Waste Hauler manifests shall be retained for review as with any other record concerning documentation of compliance with the Order.

### EFFLUENT MONITORING

The Discharger shall monitor the wastewater entering the community leachfields. Wastewater samples may be collected from a representative sampling point after discharge from one of the septic tanks, but flow shall be monitored for the entire discharge. Effluent monitoring shall include, at a minimum, the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow	gpd	Continuous Meter	Monthly	Monthly
pH <sup>1</sup>	pH Units	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Nitrates as Nitrogen	mg/L	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly	Quarterly
Standard Minerals <sup>1</sup>	mg/L	Grab	Annually	Annually

<sup>1</sup> Standard Minerals shall include, at a minimum, the following elements and compounds: Boron, Calcium, Iron, Magnesium, Manganese, Sodium, Potassium, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

### LEACHFIELD MONITORING

A minimum of 8 inspection risers shall be established as designated monitoring points. The selected risers shall be located so as to adequately characterize the entire subsurface disposal area. These risers will be permanently numbered and the total depth of each riser will be established and recorded.

The Discharger shall conduct a visual inspection of the leachfields on a **monthly basis**. Results shall be recorded and submitted with the monthly monitoring report. Evidence of surfacing wastewater, erosion, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms and total dissolved solids. In addition to the visual inspections, monitoring of the leachfields shall include the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Application Rate <sup>1</sup>	gal/acre•day	Calculated	Monthly	Monthly
Leachline Riser Inspection <sup>2</sup>	Inches	Measurement	Twice Monthly	Monthly

<sup>1</sup>The application rate for each leachfield

<sup>2</sup>The Discharger shall measure the depth of any ponded wastewater in each inspection riser. The Discharger shall provide the depth of each disposal trench and the corresponding depth of soil remaining between the ponded wastewater and the surface.

### GROUNDWATER MONITORING

The following groundwater monitoring program shall become effective as of the fourth quarter of 2005. Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Board for review and approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below. Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged at least three well volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected using standard EPA methods and an approved Sampling and Analysis Plan. 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	Quarterly	Quarterly
Groundwater Elevation <sup>1</sup>	0.01 feet	Calculated	Quarterly	Quarterly
Gradient	feet/feet	Calculated	Quarterly	Quarterly
Gradient Direction	degrees	Calculated	Quarterly	Quarterly
pH	pH Units	Grab	Quarterly	Quarterly
Total Coliform Organisms	MPN/100 mL	Grab	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly	Quarterly
Standard Minerals <sup>2</sup>	mg/L	Grab	Quarterly	Quarterly

<sup>1</sup> Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

<sup>2</sup> Standard Minerals shall include, at a minimum, the following elements/compounds: Boron, Calcium, Iron, Magnesium, Manganese, Sodium, Potassium, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

<sup>3</sup> Groundwater sampling shall begin during the fourth quarter 2005.

### REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., process wastewater effluent, groundwater well, 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 in the next scheduled monitoring report.

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

#### **A. Monthly Monitoring Reports**

Monthly reports shall be submitted to the Regional Board on the **1<sup>st</sup> day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of effluent and leachfield monitoring;
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. If requested by staff, copies of laboratory analytical report(s); and
4. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program.

#### **B. Quarterly Monitoring Reports**

**Beginning with the fourth quarter 2005**, Quarterly Monitoring Reports shall be submitted to the Regional Board by the **1<sup>st</sup> day of the second month** following the end of the quarter (i.e. the January-March quarterly report is due by May 1<sup>st</sup>) each year. The Quarterly Reports may be combined with the appropriate monthly monitoring report. At a minimum, the report shall contain:

1. Results of the groundwater monitoring;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities. 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 the casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of the groundwater flow direction and gradient on the date of measurement, comparison to previous flow direction and gradient data, and discussion of seasonal trends, if any;

4. A narrative discussion of the analytical results for all media and 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 discharge specifications, groundwater limitations, and surface water limitations, and 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 other sampling stations, and groundwater elevation contours referenced to mean sea level datum;
8. Copies of laboratory analytical report(s).

### **C. Annual Monitoring Reports**

An Annual Report shall be prepared as the fourth quarter monitoring report and shall include all monitoring data required in the monthly/quarterly schedule. The Annual Report shall be submitted to the Regional Board by **1 February of each year** and shall include the following:

1. If requested by staff, tabular and graphical summaries of all data collected during the year;
2. Results of the effluent and groundwater monitoring performed on an annual basis;
3. An evaluation of the performance of the wastewater treatment system, as well as a forecast of the flows anticipated in the next year;
4. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
5. Annual summary of septic tank inspections for the year, including the number of tanks on which notifications for cleaning were issued, and verification that those tanks were pumped and that waste was removed by a licensed hauler; and
6. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter

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shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

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

Ordered by: \_\_\_\_\_  
THOMAS R. PINKOS, Executive Officer

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(Date)