CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. R5-2009-0003

FOR
AMADOR WATER AGENCY
PINE GROVE COMMUNITY LEACHFIELD SYSTEM
AMADOR COUNTY

This Revised Monitoring and Reporting Program (Revised MRP) describes requirements for monitoring septic tank, treated effluent, leachfields, groundwater and surface water. This Revised MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this revised MRP unless and until another revised MRP is issued by the Executive Officer.

All samples shall 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.

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

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

SEPTIC TANK 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.

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

Parameter	Units	Type of Measurement	Minimum Inspection	Reporting Frequency
Distance between top of sludge layer and bottom of outlet device [1]	Inches	Staff Gauge	Annually	Annually

1. The Discharger shall visually inspect the tanks for signs of damages, leakage, or deterioration

The Discharger shall retain records of each inspection, by street address, noting the date and measured readings and calculations. The Discharger shall also record when cleaning is required, the date of notice to the homeowner, 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 PRIOR TO LEACHFIELD

The Discharger shall conduct effluent monitoring of the wastewater entering each leachfield; samples shall be collected from leachfield dosing tanks. Effluent monitoring shall include, at a minimum, the following:

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Total flow to the leachfields	gpd	Meter Observation	Weekly	Monthly
Flow to each leachfield	gpd	Calculated [1]	Weekly	Monthly
Total Dissolved Solids	mg/L	Grab/Composite [2]	Quarterly	Quarterly [4]
Nitrate as Nitrogen	mg/L	Grab/Composite [2]	Quarterly	Quarterly [4]
Total Kjeldahl Nitrogen	mg/L	Grab/Composite [2]	Quarterly	Quarterly [4]
pH	Std. Unit	Grab/Composite [2]	Quarterly	Quarterly [4]
Standard Minerals [3]	mg/L	Grab/Composite [2]	Annually	Annually

1. Per dose counter.
2. Grab/Composite indicates samples may be collected by composite sampler or grab method.
3. Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, magnesium, potassium, sodium, sulfate, iron, manganese, total alkalinity (including alkalinity series), and hardness.
4. Quarterly results shall be reported in the Monthly Monitoring Report for the month during which sampling occurs.

LEACHFIELD AREA MONITORING

The Discharger shall conduct a visual inspection of the leachfields on a **weekly** basis, and the results shall be included in the monthly monitoring report. Photocopies of entries into an operator's log are acceptable. 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:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Application Rate [1]	gal/acre•day	Calculated	Monthly	Monthly
Leachline Riser Inspection [2]	Inches	Measurement	October, December, February, April, July	Monthly
Acreage Applied [3]	Acres	Calculated	Monthly	Monthly

1. The application rate for each leachfield.
2. The Discharger shall measure and record the distance from the surface of the liquid in the observation port to the surface of the ground in the active lateral(s). In addition, AWA shall record when lateral distribution lines are switched.
3. Land application areas shall be identified and a map identifying all land application areas included.

GROUNDWATER MONITORING

Groundwater samples shall be collected from each groundwater monitoring well in accordance with an approved groundwater sampling plan. Prior to sampling, 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 flow direction. Samples shall be collected and analyzed using EPA methods or other methods approved by the Central Valley Water Board. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Groundwater Elevation [1]	0.01 Feet	Measurement	Semi-annually [4]
Depth to Groundwater	0.01 Feet	Calculated	Semi-annually [4]
Gradient	Feet/Feet	Calculated	Semi-annually [4]
Gradient Direction	Degrees	Calculated	Semi-annually [4]
Total Coliform Organisms [2]	MPN/100mL	Grab	Semi-annually [4]
Total Dissolved Solids	mg/L	Grab	Semi-annually [4]
Nitrate as Nitrogen	mg/L	Grab	Semi-annually [4]
Total Kjeldahl Nitrogen	mg/L	Grab	Semi-annually [4]
pH	Std. Unit	Grab	Semi-annually [4]
Standard Minerals [3]	mg/L	Grab	Annually [5]

1. Groundwater elevation shall be based on depth-to-water using a surveyed measuring point elevation on the well and a surveyed reference elevation.
2. Using a minimum of 15 tubes or 3 dilutions.
3. Standard Minerals shall include, at a minimum, the following elements and compounds: Boron, Calcium, Chloride, Iron, Manganese, Magnesium, Potassium, Sodium, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.
4. Semi-annual groundwater monitoring shall occur in the first and the third quarter of each calendar year.
5. Annual groundwater monitoring shall occur in the first quarter of each calendar year.

SURFACE WATER MONITORING

The Discharger shall observe Jackson Creek monthly for the presence of water in the creek.

When water is present, the following surface water monitoring shall apply. The Discharger shall establish three sampling stations as follows: S-1 shall be about 100 feet upstream of the leachfield disposal area of Phase 1, S-2 shall be in proximity of the leachfield disposal area between Phase 1 and Phase 2 leachfields, and S-3 shall be 100 feet downstream of Phase 2 leachfield.

Constituents	Units	Type of Sample	Sampling and Reporting Frequency
Total Dissolved Solids	mg/L	Grab	Quarterly [1]
Nitrate as Nitrogen	mg/L	Grab	Quarterly [1]
Chloride	mg/L	Grab	Quarterly [1]
Total Coliform Organisms	MPN/100mL	Grab	Quarterly [1]

1. Quarterly results shall be reported in the Monthly Monitoring Report for the month during which sampling occurs.

If samples cannot be collected because water is not present in Jackson Creek, then the Discharger shall so note on the monthly monitoring report.

WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the municipal water supply can be obtained. A copy of the water supply monitoring results obtained from the Pine Grove Community Service District or the California Department of Public Health is acceptable. Water supply monitoring shall include at least the following for each water source used during the previous year:

Constituents	Units	Sampling Frequency
Total Dissolved Solids	mg/L	Annually
Electrical Conductivity	mg/L	Annually
pH	pH units	Annually
Standard Minerals [1]	mg/L	Annually

1. Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, manganese, magnesium, nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, leachfield, 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.

A. Monthly Monitoring Reports

Weekly, monthly monitoring data shall be reported in monthly monitoring reports. Monthly reports shall be submitted to the Regional Board on the **1st 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, leachfield and surface water 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. Semi-Annual Monitoring Reports

The semi-annual monitoring reports shall be submitted to the Central Valley Water Board by the **1st day of May and October** each year.

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.

The semi-annual reports shall include the following:

1. Results of groundwater monitoring;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDRs, this Revised MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater and method of sampling;
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 groundwater 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 groundwater limitations and an explanation of any violation of those requirements;
6. 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;

7. Copies of laboratory analytical report(s) for groundwater monitoring; and

8. Summary data tables of historical and current water table elevations and analytical results.

C. Annual Report

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

1. The results from annual monitoring of the septic tanks, effluent, groundwater and water supply;

2. Tabular and graphical summaries of all data collected during the year;

3. A digital database (Microsoft Excel) containing historic groundwater data;

4. An evaluation of the groundwater quality beneath the land application areas;

5. An evaluation of the performance of the leachfields, including discussion of capacity, effluent distribution, leachfield erosion, and a forecast of the flows anticipated in the next year;

6. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;

7. A description of any activity to control vegetation in the leachfield area;

8. Annual summary of the 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;

9. A statement of when the O&M Manual was last reviewed for adequacy, and a description of any changes made during the year;

10. Equipment maintenance and calibration records, as described in Standard Provision No. C.4;

11. A copy of the certification for each certified wastewater treatment plant operator working at the facility and a statement about whether the Discharger is in compliance with Title 23, CCR, Division 3, Chapter 26; and

12. A discussion of the following:

    a. Salinity reduction efforts implemented in accordance with any required workplan;

b. Other best practical treatment and control measures implemented pursuant to any approved BPTC workplan (if required by the Executive Officer); and

c. Based on monitoring data, an evaluation of the BPTC measures that were implemented.

A letter transmitting the self-monitoring reports shall accompany each report. The 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 shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above revised monitoring program on the first day of the month following adoption of this Order.

Ordered by: Original signed by Frederick Moss
for Pamala C. Creedon

PAMELA C. CREEDON, Executive Officer

7 December 2011
(Date)

LF: 11/30/2011