CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2009-____
FOR

AMADOR WATER AGENCY
PINE GROVE COMMUNITY LEACHFIELD SYSTEM
AMADOR COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring septic tank, treated effluent, leachfields, groundwater and surface water. This MRP is issued 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. Regional Board staff shall approve specific sample station locations prior to implementation of sampling activities.

All samples should be representative of the volume and nature of the discharge or matrix of material sampled. 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
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 will 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 CLS	gpd	Meter	Weekly	Monthly
Flow to each leachfield	gpd	Calculated[1]	Weekly	Monthly
Total Dissolved Solids	mg/l	Grab/Composite[2]	Quarterly	Quarterly
Nitrates as Nitrogen	mg/l	Grab/Composite[2]	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/l	Grab/Composite[2]	Quarterly	Quarterly
pH	Std. Unit	Grab/Composite[2]	Quarterly	Quarterly
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.

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

Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for review and approval. All wells identified in the groundwater monitoring well network in the Findings of this Order, as well as any wells installed after adoption of this Order, shall be sampled and analyzed according to the schedule below.

Prior to sampling, 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. Water table elevations shall be calculated and used to determine groundwater gradient and direction of flow. Samples shall be collected using approved EPA methods. 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	Quarterly
Depth to Groundwater	0.01 Feet	Calculated	Quarterly
Gradient	Feet/Feet	Calculated	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly
Total Coliform Organisms[2]	MPN/100ml	Grab	Quarterly
Total Dissolved Solids	mg/l	Grab	Quarterly
Nitrates as Nitrogen	mg/l	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/l	Grab	Quarterly
pH	Std. Unit	Grab	Quarterly
Standard Minerals[3]	mg/l	Grab	Annually

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.

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. The intent of the monitoring stations are to monitoring surface water quality upstream of the entire leachfield system, at an area of possible influence from the leachfield disposal and then downstream of the entire leachfield system. So, one station (S-1) shall be about 100 feet upstream of the leachfield disposal area of Phase 1, one station (S-2) shall be in proximity of the leachfield disposal area between Phase 1 and Phase 2, and one station (S-3) shall be 100 feet downstream of Phase 2.

Constituents	Units	Type of Sample	Sampling and Reporting Frequency
Total Dissolved Solids	mg/l	Grab	Quarterly
Nitrate as Nitrogen	mg/l	Grab	Quarterly
Chloride	mg/l	Grab	Quarterly
Total Coliform Organisms	MPN/100ml	Grab	Quarterly

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

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.

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

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 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 Report

The Discharger shall establish a quarterly sampling schedule for effluent and groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Board by the **1st day of the second month after the quarter** (i.e. the January-March quarterly reports is due by May 1st) and may be combined with the monthly report. The monitoring report shall present a summary of monitoring data from each monitoring well using the methods described in Title 27, Section 20415(e)(10). The Quarterly Report shall include the following:

1. Results of effluent, groundwater and surface water monitoring;

2. Complete copy of the results of the monitoring data of the community water supply obtained from the Pine Grove Community Service District or the California Department of Public Health, including its EC/TDS data;

3. 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 WDR, 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;

4. 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;

5. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);

6. A comparison of monitoring data to the effluent and groundwater limitations and an explanation of any violation of those requirements;

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

8. 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; and

9. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be prepared as the December monthly monitoring report. The Annual Report will include all monitoring data required in the monthly schedule. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular monthly and quarterly monitoring report for the last month and quarter of the year;

2. The results from annual monitoring of the effluent, groundwater.

3. If requested by staff, tabular and graphical summaries of all data collected during the year;

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

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

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

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.

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. 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 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 monitoring program on the first day of the month following adoption of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

_____
(Date)