CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. R5-2003-0182

FOR
AMADOR WATER AGENCY
GAYLA MANOR WASTEWATER TREATMENT FACILITY
AMADOR COUNTY

This Monitoring and Reporting Program (MRP) presents requirements for monitoring of septic tanks, wastewater influent, effluent, storage reservoir, spray disposal areas, groundwater, sludge, and water supply. 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. Specific sample station locations shall be approved by Regional Board staff prior to implementation of sampling activities.

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. Field testing 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 manufacturer's recommendations; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

SEPTIC TANK MONITORING

The Discharger shall monitor each septic tank and report this information in the annual reports. Septic tanks shall be inspected annually for the presence of scum 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, the date that cleaning or repair occurred, and the date of AWA re-inspection.

INFLUENT MONITORING

Influent samples shall be collected at approximately the same time as effluent samples and should be representative of the influent. Influent monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow[1]	gpd	Continuous Meter	Daily[4]	Monthly
BOD_5 [2, 3]	mg/L	Grab	Monthly	Monthly

[1] The meter shall be placed after the gravel filter bed but prior to discharge to the storage reservoir or leachfield.
[2] 5-day biochemical oxygen demand.
[3] BOD influent samples shall be collected prior to discharge into the recirculating gravel beds.
[4] Daily flow measurements for weekends may be estimated using flow meter readings taken from the Friday and Monday readings.

EFFLUENT MONITORING

Samples of effluent shall be collected immediately downstream of the chlorine contact basin. At a minimum, effluent monitoring shall consist of the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
BOD[1]	mg/L	Grab	Weekly[5]	Monthly
Total Suspended Solids	mg/L	Grab	Weekly[5]	Monthly
pH	Standard Units	Grab	Weekly[5]	Monthly
Total Coliform Organisms	MPN[2]/100 ml	Grab	Weekly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly[3]	Monthly
Sodium	mg/L	Grab	Monthly[3]	Monthly
Chloride	mg/L	Grab	Monthly[3]	Monthly
Nitrate as Nitrogen	mg/L	Grab	Monthly[3]	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly[3]	Monthly
Standard Minerals [4]	mg/L	Grab	Annually	Annually

[1] 5-day Biochemical Oxygen Demand
[2] Most Probable Number
[3] Samples shall be collected monthly through December 2004. Beginning January 2005 samples shall be collected quarterly.
[4] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

[5] Samples shall be collected weekly through December 2004. Beginning January 2005 samples shall be collected monthly.

STORAGE RESERVOIR MONITORING

The effluent storage reservoir shall be monitored as follows. If the reservoir is empty on the scheduled monitoring date, the Discharger shall report the freeboard monitoring result as "dry".

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen[1]	mg/L	Grab	Weekly	Monthly
Freeboard	0.1 feet	Measurement	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Levee condition[2]	--	Observation	Weekly	Monthly
Total Dissolved Solids	mg/L	Grab	Quarterly	Monthly[3,4]
Nitrate as Nitrogen	mg/L	Grab	Quarterly	Monthly[3,4]
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly	Monthly[3,4]

[1] Samples shall be collected at a depth of one foot, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.
[2] Containment levees shall be observed for signs of seepage or surfacing water along the exterior toe of the levees. If surfacing water is found, then a sample shall be collected and tested for total dissolved solids.
[3] Results to be included in the monthly report submitted immediately after the samples were collected.
[4] By January 2005, these samples do not need to be collected.

SPRAY DISPOSAL AREA MONITORING

Monitoring of the spray disposal areas shall be conducted **daily** when the disposal areas are used, and the results shall be included in the monthly monitoring report. Evidence of erosion, saturation, irrigation runoff, irrigation spray/mist migrating off site, or the presence of nuisance conditions shall be noted in the report. Storage reservoir monitoring results shall be used in calculations to ascertain loading rates at the spray disposal areas. Monitoring of the spray disposal areas shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow[3]	Gallons	Continuous	Daily	Monthly
Rainfall[4]	Inches	Observation	Daily	Monthly
Acreage Applied [1]	Acres	Calculated	Daily	Monthly
Water Application Rate [2, 3]	gal/acre/day	Calculated	Daily	Monthly
Total Nitrogen Loading Rate [2]	lbs/ac/month	Calculated	Monthly	Monthly
Total Dissolved Solids Loading Rate [2]	lbs/ac/month	Calculated	Monthly	Monthly

[1] Land application areas shall be identified.
[2] Calculated average for each disposal field area.
[3] Flow and application rates for weekends and holidays may be calculated using meter readings taken from the Friday and Monday readings.
[4] On weekends and holiday when the spray disposal fields are not operating due adverse conditions (i.e., rainfall, field saturation, etc), daily rainfall may be reported as averages over a time period or estimated based on data from nearby weather station. However, if spray fields are operating during the weekend or holiday, then daily rainfall totals must be

reported.

At least **once per week** when the spray disposal areas are being used, the entire sprayfield area shall be inspected to identify any equipment malfunction or other circumstances that might allow irrigation runoff to leave the irrigation area and/or create ponding conditions that violate the Waste Discharge Requirements. A daily log of each inspection shall be kept at the facility and be submitted with the monthly monitoring reports. Photocopies of entries into an operator's field log are acceptable. If the spray disposal areas are not used, then the monthly monitoring reports shall state so. If the Discharger requests, and the Executive Officer approves, smaller setback distances than specified in Spray Disposal Area Specification D.2, then the Discharger shall comply with any additional monitoring specified by the Executive Officer.

LEACHFIELD MONITORING

The Discharger shall conduct a visual inspection of the leachfields on a weekly basis. Results shall be recorded and submitted with the monthly monitoring report. Photocopies of entries into an operator's field 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 dissolved solids. In addition to the visual inspections, monitoring of the leachfields shall include at a minimum the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow to leachfields	gpd[1]	Calculated	Twice weekly	Monthly
Leachline Riser Inspection[2]	Inches	Measurement	Bi-monthly (every other month)	Bi-monthly (every other month)

[1] The calculated application rate for each leachfield

[2] The Discharger shall measure the depth of any ponded wastewater in each inspection riser. The monitoring report shall indicate the depth of each disposal trench and the corresponding depth of soil remaining between the ponded wastewater and the surface.

GROUNDWATER MONITORING

This sampling program is effective with the 4th quarter 2004. Prior to sampling, groundwater elevations shall be measured and the wells shall be purged at least three well volumes until 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[2]	MPN/100ml	Grab	Quarterly
pH	S.U.	Grab	Quarterly
Total Dissolved Solids	mg/l	Grab	Quarterly
Nitrates as Nitrogen	mg/l	Grab	Quarterly
Total Kjeldahl nitrogen	mg/l	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 three dilutions
[3] Standard Minerals shall include, at a minimum, the following elements and compounds: boron, calcium, chloride, iron, magnesium, manganese, nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

SLUDGE MONITORING

Prior to the removal of sludge from the storage pond, a composite sample shall be collected in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document (August 1989) and tested for the following metals:

Cadmium	Copper	Nickel
Chromium	Lead	Zinc

Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated, and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report. If sludge has not been removed from the storage pond, the annual report shall simply include a statement to that effect.

WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Water supply monitoring shall include at least the following for each water source used during the previous year. As an alternative to annual water supply monitoring, the Discharger may submit results of the most current DHS water supply monitoring data.

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

[1] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, 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, reservoir, 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

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). At a minimum, the reports shall include:

1. Results of the influent, effluent, reservoir, spray disposal area, and solid wastes and sludge monitoring;
2. If quarterly effluent or reservoir samples were taken, then those results;
3. On a bi-monthly basis, the results of the leachfield monitoring;
4. Copies of inspection logs;
5. A comparison of the monitoring data to the discharge specifications and an explanation of any violation of those requirements;
6. A statement as to whether the wind meter was operational;
7. If requested by staff, copies of laboratory analytical report(s); and
8. Date(s) on which the monitoring instruments were calibrated.

B. Quarterly Report

Beginning with the 3rd Quarter 2004, the Discharger shall establish a quarterly sampling schedule for groundwater monitoring. 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) each year. The Quarterly Report shall include the following:

1. Results of groundwater monitoring. The results of regular monthly monitoring reports for March, June, September and December may be incorporated into their corresponding quarterly monitoring report;

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 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;

3. Calculation of groundwater elevations and discussion of seasonal trends if any;

4. 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);

5. A comparison of the 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; and

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

C. Annual Report

An Annual Report shall be prepared as the December 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 December monitoring report for the last sampling event of the year;

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

3. 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;

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

5. 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.

6. The results from annual monitoring of the effluent and water supply;

7. 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;

8. The results from any sludge monitoring required by the disposal facility;
9. A forecast of influent flows, as described in Standard Provision No. E.4; and
10. A statement of when the O&M Manual was last reviewed for adequacy, and a description of any changes made during the year.

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 as of the date of this Order.

Ordered by: _____
THOMAS R.PINKOS, Executive Officer

9 September 2004
(Date)

JSK: 8/30/04