CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM R5-2002-0222 (Rev1)

FOR
CALAVERAS COUNTY WATER DISTRICT AND
LA CONTENTA INVESTORS
LA CONTENTA WASTEWATER TREATMENT AND RECLAMATION FACILITY
CALAVERAS COUNTY

This Revised Monitoring and Reporting Program (Revised MRP) describes requirements for monitoring the wastewater treatment plant, effluent storage reservoirs, reclamation areas, groundwater, water supply, and supplemental water supply. 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. Regional Board staff shall approve specific sample station locations prior to implementation of sampling activities. Calaveras County Water District and La Contenta Investors are jointly responsible for implementing this Revised MRP, and shall submit joint monitoring reports.

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 grab sample shall be recorded on the sample chain of custody form. Field test instruments (such as those used to measure 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 calibrated prior to each monitoring event;
3. The 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 the MRP.

INFLUENT MONITORING

Samples of influent wastewater shall be collected at approximately the same time as effluent samples and should be representative of the influent flow to the treatment plant. At a minimum, influent monitoring shall consist of the following:

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Flow	mgd	Meter Observation	Daily	Monthly
BOD_5 at 20° C	mg/L	Grab	Monthly	Monthly
Total Suspended Solids	mg/L	Grab	Monthly	Monthly

EFFLUENT MONITORING

Effluent samples shall be collected after UV disinfection and before discharge into the storage reservoirs. These samples shall be representative of the volume and nature of the effluent discharged into the storage reservoirs. Effluent monitoring shall include the following:

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Total Coliform Organisms [1]	MPN/100 ml [2]	Grab	Daily	Monthly
BOD_5	mg/L	Grab	Weekly	Monthly
Settleable Solids	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Total Nitrogen	mg/L	Grab	Monthly	Monthly
pH	Standard	Grab	Monthly	Monthly
Standard Minerals [3]	mg/L	Grab	Annually	Annually

1 Using a minimum of 10 tubes or two dilutions.
2 Most probable number per 100 mL.
3 Standard Minerals shall include, at a minimum, the following elements/compounds: barium, boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

ULTRAVIOLET LIGHT (UV) DISINFECTION SYSTEM MONITORING

The UV disinfection system shall be monitored as specified below:

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	mgd	Meter	Continuous [1]	Monthly
Turbidity [2]	NTU	Meter	Continuous [1]	Monthly
Number of UV Banks in Operation	Number	Observation	Continuous [1]	Monthly
UV Transmittance	Percent (%)	Meter	Continuous [1]	Monthly
UV Power Setting	Percent (%)	Meter	Continuous [1]	Monthly
UV Dose [3]	mJ/cm^2	Calculated	Continuous [1]	Monthly

1 For continuous analyzers, the Discharger shall report documented routine meter maintenance activities including date, time of day, and duration, in which the analyzer(s) is not in operation.
2 The Discharger shall report the daily average turbidity as well as the total amount of time each day that the turbidity exceeded 5 NTU and the total amount of time each day that the turbidity exceeded 10 NTU.
3. Report daily minimum UV dose, daily average UV dose, and weekly average UV dose. For the daily minimum UV dose, also report associated number of banks, gallons per minute per lamp, and UV transmittance used in the calculation. If effluent discharge has received less than the minimum UV dose, report the duration and dose calculation variables associated with each incident.

STORAGE RESERVOIR MONITORING

Each of the storage reservoirs shall be monitored as specified below:

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Dissolved Oxygen [1]	mg/L	Grab	Weekly	Monthly
pH	pH units	Grab	Weekly	Monthly
Freeboard	0.1 feet	Observation	Weekly	Monthly
Berm Seepage [2]	NA	Observation	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly

[1] Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet.
[2] Reservoir containment berms and the dams shall be observed for signs of seepage or surfacing water along the exterior toe. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms and total dissolved solids.

GOLF COURSE MONITORING

Monitoring of the effluent recycling site (golf course) shall be conducted daily and the results shall be included in the monthly monitoring report. Evidence of erosion, saturation, irrigation runoff, or the presence of nuisance conditions shall be noted in the report. Effluent monitoring results shall be used in calculations to ascertain loading rates at the application area. Monitoring of the golf course shall include the following:

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Flow [1]	mgd	Continuous	Daily	Monthly
Rainfall	Inches	Observation	Daily	Monthly
Application Rate [2]	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] Flow measurement shall be provided for effluent being supplied to the golf course.
[2] For each land application area.

The entire irrigated area shall be periodically inspected during or immediately following an irrigation event 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 these inspections shall be kept at the facility and made available for review upon request.

GROUNDWATER MONITORING

Groundwater samples shall be collected from each groundwater monitoring well in accordance with an approved groundwater Sample Collection and Laboratory Analysis Plan. Prior to any sampling or purging, equilibrated groundwater elevations shall be measured to the nearest 0.01 feet. Sample collection and laboratory analysis shall follow standard EPA procedures. Each groundwater monitoring well shall be monitored at least for the following:

Constituents	Units	Sample Type	Sampling and Reporting Frequency
Groundwater Elevation [1]	± 0.01 feet	Measured	Semi-annually [2]
Depth to groundwater	± 0.01 feet	Measured	Semi-annually [2]
Gradient	feet/feet	Calculated	Semi-annually [2]
Gradient Direction	Degrees	Calculated	Semi-annually [2]
pH	pH units	Grab	Semi-annually [2]
Total Coliform Organisms	MPN/100 mL	Grab	Semi-annually [2]
Total Dissolved Solids	mg/L	Grab	Semi-annually [2]
Nitrate as Nitrogen	mg/L	Grab	Semi-annually [2]
Total Kjeldahl Nitrogen	mg/L	Grab	Semi-annually [2]
Standard Minerals [3]	mg/L	Grab	Annually [4]

[1] 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.
[2] Samples shall be collected in the first and third quarters of each year.
[3] Standard Minerals shall include, at a minimum, the following elements/compounds: barium, boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.
[4] Samples shall be collected in the third quarter of each year.

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:

Constituent	Units	Sampling and Reporting Frequency
Electrical Conductivity [1]	µmhos/cm	Annually
Total Dissolved Solids	mg/L	Annually
pH	pH units	Annually
Standard Minerals [2]	mg/L	Annually

[1] If the source water is from more than one well, the EC shall be reported as a weighted average and include copies of supporting calculations.

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

SUPPLEMENTAL WATER SUPPLY (NEW HOGAN RESERVOIR)

A sampling station shall be established where a representative sample of the golf course supplemental water supply from New Hogan Reservoir can be obtained. Supplemental water supply monitoring shall include the following:

Constituent	Units	Sample Type	Sampling and Reporting Frequency
Total Dissolved Solids	mg/L	Grab	Annually
pH	pH units	Grab	Annually
Electrical Conductivity	µmhos/cm	Grab	Annually
Standard Minerals [1]	mg/L	Grab	Annually

[1] Standard Minerals shall include, at a minimum, the following elements/compounds: barium, boron, calcium, chloride, iron, magnesium, manganese, 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., influent, 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 to the Regional Board.

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

Daily, weekly, and 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 influent, effluent, UV disinfection, storage reservoir, and golf course 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 Groundwater Monitoring Reports

Semi-annual monitoring reports shall be submitted to the Central Valley Water Board by the **1st day of August** (for the first six months of the year) and the **1st day of February** (for the last six months of the year). The Semi-Annual Monitoring Reports 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 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, 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 tends, 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; and
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

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

1. The results from annual monitoring of effluent, groundwater, water supply, and supplemental water supply;
2. Tabular and graphical summaries of all data collected during the year;
3. A digital database (Microsoft Excel) containing historic groundwater and effluent data;
4. An evaluation of the groundwater quality beneath the wastewater treatment facility and golf course;
5. The report of the annual cross-connection test performed in accordance with CDPH requirements by a certified Cross Connection Control Specialist.
6. Verification of appropriate employee training for all personnel involved in operation and maintenance of the golf course irrigation system.
7. 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;
8. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
9. 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.
10. Summary of information on the disposal of sludge and/or solid waste;
11. The results from any sludge monitoring required by the disposal facility; and
12. A forecast of influent flows, as described in Standard Provision No. E.4.

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 issuance of this Revised MRP.

Ordered by: Original signed by
PAMELA C. CREEDON, Executive Officer

13 November 2012
(Date)

LF: 10/25/12