

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. R5-2002-0157
FOR
TRUSTEES OF U.A. LOCAL 38 CONVALESCENT TRUST FUND
KONOCTI HARBOR RESORT AND SPA
LAKE COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring influent wastewater, treated effluent, wastewater treatment and storage ponds, groundwater, 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.

Regional Water Board staff shall approve specific sampling locations prior to implementation of sampling activities. 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 EC, 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

Influent samples shall be collected upstream of the primary clarifier. Samples shall be collected at approximately the same time as effluent samples. Influent monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow ¹	gpd	Meter Reading	Daily	Monthly
Average Daily Flow ²	gpd	Calculated	--	Monthly
BOD ₅ ³	mg/L	Grab	Weekly	Monthly
Total Suspended Solids	mg/L	Grab	Weekly	Monthly
Electrical Conductivity	umhos/cm	Grab	Weekly	Monthly

¹ Daily influent flow volume.

² Sum of daily flow volumes divided by number of days in the month.

³ 5-day Biochemical Oxygen Demand at 20°C.

EFFLUENT MONITORING

Effluent samples shall be collected downstream of the last treatment or storage pond prior to discharge to the subsurface disposal system. All samples shall be representative of the volume and nature of the discharge. Effluent monitoring shall include at least the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
BOD ₅	mg/L	Grab	Weekly	Monthly
pH	Std.	Grab	Weekly	Monthly
Total Suspended Solids	mg/L	Grab	Weekly	Monthly
Settleable Solids	ml/L	Grab	Weekly	Monthly
Total Coliform Organisms ¹	MPN/100 ml ²	Grab	Weekly	Monthly
Electrical Conductivity	umhos/cm	Grab	Weekly	Monthly
Total Residual Chlorine	mg/L	Grab	Weekly	Monthly
Sodium	mg/L	Grab	Monthly	Monthly
Chloride	mg/L	Grab	Monthly	Monthly
Nitrate Nitrogen	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
Ammonia Nitrogen	mg/L	Grab	Monthly	Monthly
Trihalomethanes ³	ug/L	Grab	Quarterly	Monthly
Standard Minerals ⁴	mg/L	Grab	Quarterly	Monthly

¹ Using a minimum of 15 tubes or 3 dilutions.

² Most probable number per 100 ml.

³ Individual trihalomethane constituent concentrations shall be quantified using EPA Method 8260B or equivalent.

⁴ Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, magnesium, potassium, sulfate, iron, manganese, total alkalinity (including alkalinity series), and hardness.

POND MONITORING

Each of the wastewater treatment and storage ponds shall be monitored as specified below:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Freeboard	0.1 feet	Measurement	Weekly	Monthly
Dissolved Oxygen ¹	mg/L	Grab	Weekly	Monthly
pH ¹	Standard	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Berm condition	--	Observation	Monthly	Monthly

¹ A sample shall be collected opposite the inlet at a depth of one foot from each pond in use. Samples shall be collected between 0700 and 0900 hours.

GROUNDWATER MONITORING

Effective 1 January 2009, the Discharger shall establish a quarterly sampling schedule for groundwater monitoring, with samples obtained approximately every three months. Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Water Board for review and approval. Once installed, all new monitoring wells shall be added to the MRP, and shall be sampled and analyzed according to the schedule below.

Prior to well purging, groundwater elevations shall be measured. 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. The monitoring wells shall be purged of at least three well volumes or until temperature, pH, and electrical conductivity have stabilized. Samples shall be collected and analyzed using approved EPA methods.

If one or more wells do not contain water, or contain water but do not recharge after purging, the water level in such wells shall be rechecked monthly until there is sufficient volume after purging to obtain representative sample(s).

Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Depth to Groundwater	0.01 feet	Measurement	Quarterly	Quarterly
Groundwater Elevation ¹	0.01 feet	Calculated	Quarterly	Quarterly
Gradient	feet/feet	Calculated	Quarterly	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Nitrate Nitrogen	mg/L	Grab	Quarterly	Quarterly
Ammonia Nitrogen	mg/L	Grab	Quarterly	Quarterly
pH	pH units	Grab	Quarterly	Quarterly
Trihalomethanes ²	µg/L	Grab	Quarterly	Quarterly
Boron	mg/L	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Iron	mg/L	Grab	Quarterly	Quarterly
Manganese	mg/L	Grab	Quarterly	Quarterly

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Sodium	mg/L	Grab	Quarterly	Quarterly
Total Coliform Organisms ³	MPN/100 mL	Grab	Quarterly	Quarterly
Standard Minerals ⁴	mg/L	Grab	Quarterly	Quarterly
Metals ⁵	ug/L	Grab	Quarterly	Quarterly

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 Individual trihalomethane constituent concentrations shall be quantified using EPA Method 8260B or equivalent.

³ Using a minimum of 15 tubes or 3 dilutions.

⁴ Standard Minerals shall include, at a minimum, the following elements/compounds: calcium, magnesium, potassium, sulfate, total alkalinity (including alkalinity series), and hardness.

⁵ At a minimum, the following metals shall be included: arsenic, copper, lead, iron, manganese, molybdenum, nickel, and zinc. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

SLUDGE MONITORING

The Discharger shall keep records regarding sludge and biosolids generated by the WWTF, including any analytical test results; the quantity removed for disposal; the quantity removed from the ponds and temporarily stored on site; and steps taken to prevent nuisance conditions. Records shall be stored onsite and available for review during inspections.

If sludge or biosolids is transported off-site for disposal, then the Discharger shall submit records identifying the hauling company, the amount transported, the date removed from the facility, the disposal facility name and address, and copies of all analytical data required by the entity accepting the waste. These records shall be submitted as part of the Annual Monitoring Report.

WATER SUPPLY MONITORING

The Discharger shall monitor the water supply as required by the California Department of Public Health (formerly Department of Health Services), and shall report the following minimum monitoring data to the Regional Water Board:

Constituents	Units	Sampling Frequency
Total Dissolved Solids	mg/L	Annually
Electrical Conductivity	umhos/cm	Annually
pH	Std. Unit	Annually
Standard Minerals ¹	mg/L	Annually

¹ Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, magnesium, sodium, potassium, chloride, nitrogen, sulfate, iron, manganese, 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, pond, 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 Water 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 Professional Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Water Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). Such reports shall bear the certification and signature of the Discharger's authorized representative. At a minimum, the monthly monitoring reports shall include:

1. Results of influent, effluent, and pond monitoring.
2. A comparison of monitoring data to the discharge specifications, disclosure of any violations of the WDRs, and an explanation of any violation of those requirements. Monitoring data shall be presented in tabular format.
3. Copies of current calibration logs for all field test instruments.
4. If requested by staff, copies of laboratory analytical report(s).
5. A summary facility inspection and repair report. The following items shall be inspected at the specified frequency and specifically addressed in the report:
 - a. Condition of fences designed to prevent public access (monthly).
 - b. Odors discernible at the property boundary (weekly).
 - c. Integrity of all berms, dikes, and levees, including consideration of damage from erosion, wave action, and burrowing rodents (weekly).
 - d. Headworks damage and debris accumulation (weekly).
 - e. Flow metering system function (weekly).
 - f. Piping systems, including control valves and visible piping (weekly).

The facility inspection and repair report shall include the name of the person conducting the inspections, dates of inspection, problems identified, repairs recommended, repairs completed, and dates of completion.

B. Quarterly Monitoring Reports

The Discharger shall establish a quarterly sampling schedule for 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 report is due by May 1st) and may be combined with the monthly report. The Quarterly Report shall include the following:

Results of groundwater monitoring.

1. 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.
2. 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.
3. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
4. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements.
5. Summary data tables of historical and current water table elevations and analytical results;
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.

C. Annual Report

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

The results of annual water supply monitoring.

1. A summary of sludge monitoring information, including analytical results for any testing required by the disposal facility.
2. If requested by staff, tabular and graphical summaries of WWTF monitoring data collected during the year.
3. An evaluation of the performance of the WWTF, including discussion of capacity issues, infiltration and inflow (I/I), nuisance conditions, and a forecast of the flows anticipated in the next year.
4. A discussion of the following:

- a. Compliance with the Effluent Limitations of the WDRs;
 - b. Salinity reduction efforts implemented;
 - c. Other best practical treatment and control measures implemented; and
 - d. Based on monitoring data, an evaluation of the salinity reduction and BPTC measures that were implemented.
5. An evaluation of the groundwater quality beneath the wastewater treatment facility, and land application areas.
 6. 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.
 7. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.
 8. 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.
 9. Equipment maintenance and calibration records, as described in Standard Provision No. C.4.
 10. A forecast of influent flows, as described in Standard Provision No. E.4.

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

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

24 October 2008
(Date)