

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. 98-098 (REV.2)

FOR
MOTHERLODE INVESTORS, LLC
AND CITY OF ANGELS
GREENHORN CREEK RESORT
CALAVERAS COUNTY

This Monitoring and Reporting Program (MRP) presents requirements for reclaimed water reuse at Motherlode Investors, LLC dba Greenhorn Creek Resort golf course. This MRP is issued pursuant to California Water Code Section 13267. Motherlode Investors, LLC and the City of Angels (Dischargers) shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

Section 13267 of the California Water Code states, in part:

“In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”

Section 13268 of the California Water Code states, in part:

“(a(1)) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying and information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.”

Motherlode Investors, LLC owns and operates the facilities that are subject to Water Reclamation Requirements (WRRs) Order No. 98-098. The City of Angels is the producer of the recycled water. The monitoring reports are necessary to ensure that the Dischargers comply with the WRRs.

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 sample shall be recorded on the sample chain of custody form.

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

1. The user is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
3. 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 this MRP.

RECLAIMED WATER STORAGE POND MONITORING

For each pond storing reclaimed water at the golf course, monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
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. Samples shall be collected between 0700 and 0900 hours.

² Pond berm shall be observed for signs of seepage or surfacing water along the exterior toe of the berm. If surfacing water is found, then a sample shall be collected and tested for pH and total dissolved solids.

WATER RECLAMATION AREA (GOLF COURSE) MONITORING

Monitoring of the water reclamation areas (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. Storage pond monitoring results shall be used to calculate loading rates at the application areas.

Monitoring of the water reclamation areas shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Reclaimed Water Flow				
To Golf Course Storage	mgd	Continuous	Daily	Monthly
From Storage to Each Irrigation Area ¹	mgd	Continuous	Daily	Monthly
Rainfall ²	Inches	Observation	Daily	Monthly

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Water Application Rate ³	gal/acre/day	Calculated	Daily	Monthly
Total Nitrogen Loading Rate ^{3, 4, 5}	lbs/ac/month	Calculated	Monthly	Monthly
TDS Loading Rate ^{3, 4, 5}	lbs/ac/month	Calculated	Monthly	Monthly

TDS denotes Total Dissolved Solids.

- ¹ Flow measurement shall be provided for effluent being supplied to the golf course.
- ² Rainfall data to be collected from the weather station that is nearest to the disposal fields. Alternatively, a rain gauge may be installed at the site.
- ³ For each reclamation area.
- ⁴ Indicate the TDS and total nitrogen concentrations.
- ⁵ Only during the months when the reclaimed water is applied to the golf course.

At least **once per week** the water reclamation areas shall be 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 areas and/or create ponding conditions that violate the Water Reclamation 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 irrigation of reclaimed water is not conducted, then the monthly monitoring reports shall state so.

GROUNDWATER MONITORING

This groundwater sampling and analysis program applies to all groundwater monitoring wells installed at Greenhorn Creek golf course. 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 approved EPA methods or other methods approved by the Central Valley Water Board. Semi-annual groundwater monitoring shall occur in January and July. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling and Reporting Frequency</u>
Groundwater Elevation ¹	0.01 Feet	Measurement	Semi-annually
Depth to Groundwater	0.01 Feet	Calculated	Semi-annually
Gradient Magnitude	Feet/Feet	Calculated	Semi-annually
Gradient Direction	Degrees	Calculated	Semi-annually
Total Coliform Organisms ²	MPN/100 mL	Grab	Semi-annually
pH	S.U.	Grab	Semi-annually
Electrical Conductivity	mg/L	Grab	Semi-annually
Total Dissolved Solids	mg/L	Grab	Semi-annually
Nitrate as Nitrogen	mg/L	Grab	Semi-annually
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, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness. Verification that the analysis is complete (i.e., cation/anion balance).

REPORTING

In reporting monitoring data, the Dischargers shall arrange the data in tabular form so that the date, sample type (e.g., storage pond(s), reclamation areas, groundwater, 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 water reclamation requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP 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 California Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

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

1. Results of storage pond and reclamation area monitoring;
2. Copies of inspection logs;
3. A comparison of the monitoring data to the discharge specifications and an explanation of any violation of those requirements;
4. If requested by staff, copies of laboratory analytical report(s);
5. Date(s) on which the monitoring instruments were calibrated; and
6. Monthly maximums, minimums, and averages for each monitored constituent/parameter.

B. Semi-annual Monitoring Reports

In addition to the monthly monitoring reports, the Dischargers shall establish semi-annual sampling schedules for groundwater monitoring such that samples are obtained approximately every six months. Semi-annual monitoring reports shall be submitted to the Board by the **1st day of March and September**. 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 the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WRRs, 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 trends, 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

In addition to the monthly and semi-annual monitoring reports, an Annual Report shall be prepared. The 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 groundwater monitoring;
2. An evaluation of the groundwater quality;
3. If requested by staff, tabular and graphical summaries of all data collected during the year;
4. 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 water reclamation requirements;
5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
6. A statement of when the Operation and Maintenance 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. 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 Dischargers have 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 Dischargers, or the Dischargers' authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Dischargers 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
28 October 2011

(Date)