

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISION NO. 2, MONITORING AND REPORTING PROGRAM NO. R5-2002-0138

FOR
TEICHERT AGGREGATES
HALLWOOD FACILITY
YUBA COUNTY

This monitoring and reporting program (MRP) incorporates requirements for monitoring the designated disposal area, groundwater, and surface water bodies; the MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a further revised MRP is issued by the Executive Officer.

Prior to implementation of sampling activities, Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff shall approve specific sample station locations. Sample collection stations shall be established such that samples collected are representative of the volume and nature of the discharge or matrix of material(s) sampled. The person collecting the sample shall be identified along with the time, date, and location of each sample on the sample chain of custody form.

Field test instruments (such as those used to measure temperature, pH, EC, 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. Instruments are serviced and/or calibrated by the manufacturer at their respective recommended frequency; and
4. Calibration reports are submitted as described in the "Reporting" section of this MRP.

DESIGNATED DISPOSAL AREA WASTEWATER POND MONITORING

The designated disposal pond shall be sampled as described below. All samples shall be collected when the Discharger is actively discharging to the pond.

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow Rate	Million gpd	Monthly	Monthly
Freeboard	0.1 feet	Weekly	Monthly
pH	Std. Units	Monthly	Monthly
Electrical Conductivity	umhos/cm	Monthly	Monthly
Mercury ^{1,2,3}	ng/L	Semi-Annual	Semi-Annual
Methyl Mercury ^{1,2,3}	ng/L	Semi-Annual	Semi-Annual
Mercury (sediment) ⁴	ng/kg	Semi-Annual	Semi-Annual
Methyl Mercury (sediment) ⁴	ng/kg	Semi-Annual	Semi-Annual

¹ Liquid samples collected for mercury/methyl mercury analysis shall be filtered using a 45-micron filter prior to digestion and analysis or equivalent.

² Mercury samples shall be collected using the methods described in *Sampling Ambient Water for Trace Metals*

(EPA Method 1669) or equivalent.

³ Samples for Total Mercury in wastewater and sediment shall be collected semi-annually (every six months), with reporting in the second and fourth quarter monitoring reports.

⁴ Total mercury sediment samples shall be collected from the wastewater pond and the sediment separated from the liquid by settling, centrifuge, or other appropriate method.

GROUNDWATER MONITORING

Groundwater samples shall be collected from all groundwater monitoring wells at the facility. Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged of at least three well volumes and until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 foot. Samples shall be collected using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Depth to Groundwater	0.01 foot	Quarterly	Quarterly
Groundwater Elevation	0.01 foot	Quarterly	Quarterly
Gradient Direction	Feet/Feet	Quarterly	Quarterly
pH	Std. Units	Quarterly	Quarterly
Electrical Conductivity	umhos/cm	Quarterly	Quarterly
Mercury ^{1,2,3}	ng/L	Semiannually	Semiannually
Methyl Mercury ^{1,2,3}	ng/L	Semiannually	Semiannually

¹ Groundwater samples collected for mercury/methyl mercury analysis shall be filtered using a 45-micron filter prior to digestion and analysis or equivalent.

² Mercury groundwater samples shall be collected using the methods described in *Sampling Ambient Water for Trace Metals* (EPA Method 1669) or equivalent.

³ Samples for Total Mercury in wastewater and sediment shall be collected semi-annually (every six months), with reporting in the second and fourth quarter monitoring reports.

SURFACE WATER BODY MONITORING

The Discharger shall collect grab water samples from all surface water bodies (ponds, and/or channels) within 500 feet of the designated disposal area and any active excavation area ponds that have been mined in the past month. Because the DDA and excavation ponds are defined as the pond plus a 100 foot buffer zone, surface water samples shall be collected in areas within 600 feet of the DDA pond or excavation pond water surfaces.

The excavation pond is not subject to this monitoring requirement, nor is the concrete lined water supply canal that traverses the Discharger's property. If another Discharger's wastewater ponds are within the area to be monitored, then those ponds do not need to be sampled as a result of this Order. If any of the water bodies requiring sampling are on land outside the Discharger's control, then the Discharger shall either obtain permission to access the water bodies or shall submit a report detailing how it proposes to comply with this monitoring requirement. Surface water body monitoring shall include, at a minimum, the following:

<u>Constituents</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Electrical Conductivity	umhos/cm	Quarterly	Quarterly
pH	Std. Units	Quarterly	Quarterly
Turbidity ¹	NTU	Quarterly	Quarterly
TPH-D ²	mg/L	Semiannually	Semiannually
TPH-Oil and Grease ²	mg/L	Semiannually	Semiannually
BTEX ³	mg/L	Semiannually	Semiannually
Pesticides ⁴	mg/L	Annually	Annually
Mercury ^{1,5,6}	ng/L	Annually	Annually
Methyl Mercury ^{1,5,6}	ng/L	Annually	Annually

¹ If turbidity monitoring indicates the presence of turbidity in any water body in excess of 5 nephelometric turbidity units (NTUs), that water body shall be sampled within 7-days, in addition to the annual sample, and the sample analyzed for total mercury (unfiltered sample made turbid before digestion), dissolved mercury, and methyl mercury.

² Analysis by EPA Method 8015 Modified for diesel, and oil & grease.

³ Analysis by EPA Method 8020 or equivalent.

⁴ Analysis by EPA Method 8081A or equivalent.

⁵ Groundwater samples collected for dissolved mercury/methyl mercury analysis shall be filtered using a 45-micron filter prior to digestion and analysis, with the extraction of the total mercury requirement described in Footnote No. 1.

⁶ Mercury groundwater samples shall be collected using the methods described in *Sampling Ambient Water for Trace Metals* (EPA Method 1669).

⁷ Samples collected semiannually or annually shall be collected as appropriate for reporting in the second and fourth quarter monitoring reports.

MERCURY METHYLATION TEST PLOT MONITORING

The Discharger shall establish a mercury methylation test plot and collect saturated sediment samples to predict mercury behavior in reclaimed areas. Samples collected for liquid phase chemical analyses shall be collected in close proximity to the saturated sediment sample collection location. Surface water body monitoring shall include, at a minimum, the following:

<u>Constituents</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Mercury ^{1,2}	ng/kg	Annually	Annually
Methyl Mercury ^{1,2}	ng/kg	Annually	Annually
Fixed Dissolved Solids ²	mg/L	Annually	Annually
Sulfate ²	mg/L	Annually	Annually
Oxygen ²	mg/L	Annually	Annually

¹ Mercury groundwater samples shall be collected using the methods described in *Sampling Ambient Water for Trace Metals* (EPA Method 1669) as applicable.

² Samples shall be collected for reporting in the second quarter monitoring reports.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., designated disposal area, groundwater, surface water body), and reported analytical result for each sample are readily discernible. The data shall be summarized 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 Central Valley 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 supervision of a Registered Engineer or Professional Geologist and signed/stamped by the registered professional.

A. Monthly Reports

All sample data collected during the month shall be reported in the monthly monitoring report. Monthly Reports shall be submitted to the Central Valley Water Board **by the first day of the second month following the month of sampling** (e.g., the January monthly report is due by 1 March). At a minimum, the reports shall include the following:

1. The results of all designated disposal area monitoring;
2. A comparison of the monitoring data to the discharge specifications, provisions, and groundwater limitations and an explanation of any violation of these requirements;
3. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program; and
4. Copies of the laboratory analytical report(s)

B. Quarterly Monitoring Report

The Discharger shall establish a quarterly/semiannual/annual sampling schedule for surface water body and groundwater monitoring such that samples are obtained approximately every 3, 6, or 12 months. The data shall be included in quarterly monitoring reports which shall be submitted to the Central Valley Water 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:

1. Results of the groundwater, surface water body, mercury methylation test plot and semiannual monitoring required in the designated disposal area monitoring;
2. A scaled map showing relevant structures and features of the facility; the locations of the designated disposal area, excavation area(s), the associated buffer zones and sampling

areas; and surface water body monitoring points;

3. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the 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 and discussion of seasonal trends if any;
5. A narrative discussion of the analytical results for all surface water body and groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
6. A comparison of the monitoring data to the surface water and groundwater limitations, and an explanation of any violation of those requirements;
7. Summary data tables of historical and current water table elevations and all analytical results;
8. A scaled map showing the locations of groundwater monitoring wells and groundwater elevation contours referenced to mean sea level datum; and
9. Copies of laboratory analytical report(s) for surface water body and groundwater monitoring.

C. Annual Monitoring Report

An Annual Monitoring Report shall be submitted by **1 February of each year**, and may be combined with the December monthly monitoring report. At a minimum, the Annual Monitoring Report shall include the following:

1. A written summary of the all significant actions taken during the year;
2. A tabular summary of the all data reported in the Monthly Monitoring Reports;
3. Tabular summaries of all monitoring data obtained during the previous year. Data showing trends, such as groundwater elevation or quality, should be presented in graphs;
4. A statement of the approximate volume of recycled materials, type of recycled material (broken asphalt pavement, concrete, etc.), and the storage location of the recycled materials.
5. A map showing the current location of the designated disposal area and active excavation pond locations. The map shall indicate setback distances and locations of any surface

water sampling points.

6. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements; and
7. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of violations discovered 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 a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

The Discharger shall implement the above Monitoring and Reporting Program as of the date of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

(Date)

TRO: 12/7/09