

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO R5-2002-0123, REVISION NO. 1

FOR  
TEICHERT AGGREGATES  
GRANT LINE ROAD PROPERTIES, LLC  
TEICHERT AGGREGATES GRANTLINE PLANT  
SACRAMENTO COUNTY

This monitoring and reporting program (MRP) describes requirements for monitoring of the wastewater and groundwater. 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.

All samples should 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 pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are calibrated prior to each use;
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.

**OPERATIONAL STATUS**

The Discharger shall maintain records in order to answer the following:

1. Has mining activity occurred during the month? Yes or No
2. Was aggregate wash water generated or discharged into the ponds during the month? Yes or No

**GRANTLINE PLANT MONITORING**

Wastewater effluent samples shall be collected from the influent discharge pipeline into the Grantline Plant's first settling pond. If the plant did not operate for a full month, then samples do not need to be collected. Grab samples are considered adequately composited to represent the effluent. Effluent monitoring shall include, at a minimum, the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Total Flow	gpd	Metered	Daily	Monthly
Total Volume of Wastewater Used for Dust Control <sup>1</sup>	gpd	Metered	Daily	Monthly

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
pH	Std.	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Aluminum, dissolved	mg/L	Grab	Quarterly	Quarterly
Iron, dissolved	mg/L	Grab	Quarterly	Quarterly
Volatile Organic Chemicals	mg/L	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Total Mercury	mg/L	Grab	Annually	Annually
Standard Minerals <sup>2</sup>	mg/L	Grab	Annually	Annually

<sup>1</sup> The total volume of wastewater that is applied daily to the West Mining Area for the purpose of dust control.

<sup>2</sup> Standard Minerals shall include, at a minimum, the following elements and compounds: Barium, Calcium, Magnesium, Sodium, Potassium, Nitrate, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

### POND MONITORING

Samples shall be collected from an established sampling stations located in an areas that will provide a sample representative of the water in each of the Grantline Plant's settling ponds. Freeboard will be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.25 feet. Monitoring of each pond 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>
Freeboard	Feet	Measurement	Weekly <sup>2</sup>	Monthly
Nuisance Odors <sup>1</sup>	mg/L	Observation	Weekly <sup>2</sup>	Monthly

<sup>1</sup>Pond shall be monitored for the presence of nuisance odors. If nuisance odors are detected around the ponds, then the Discharger shall also monitor the dissolved oxygen concentration in each pond.

<sup>2</sup>May be sampled monthly if no discharge to the ponds occurred during the previous or current calendar month.

### GROUNDWATER MONITORING

If the Executive Officer directs Teichert Aggregates to conduct groundwater monitoring, then the following groundwater monitoring program shall be implemented for the settling ponds. Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for review and approval. Once installed, all new wells shall be added to the MRP, and shall be sampled and analyzed according to the schedule below. 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:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling and Reporting Frequency</u> <sup>1</sup>
Groundwater elevation	0.01 Feet	Measurement	Quarterly
pH	S.U.	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Aluminum, dissolved	mg/L	Grab	Quarterly
Iron, dissolved	mg/L	Grab	Quarterly
Standard Minerals <sup>2</sup>	mg/L	Grab	Annually

<sup>1</sup> Only if required by the Executive Officer.

<sup>2</sup> Standard Minerals shall include, at a minimum, the following elements and compounds: Barium, Calcium, Magnesium, Sodium, Potassium, Chloride, Nitrate, 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, 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 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 Registered Engineer or Geologist and signed by the registered professional.

### A. Monthly Monitoring Reports

**If aggregate mining and/or washing of aggregate material did not occur during the month, then the monthly monitoring report shall state so, and give a projected timeline for resuming mining and/or aggregate washing operations.**

Monthly reports shall be submitted to the Regional Board by the **1<sup>st</sup> day of the second month** following the end of the reporting period (i.e. the August monthly report is due by 1 October). The monthly reports shall include the following:

1. Results of plant operational status, and pond monitoring.

2. A map presenting all wastewater ponds and the locations where freeboard is measured.
3. 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.
4. If requested by staff, copies of laboratory analytical report(s).
5. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program.

## **B. Quarterly Report**

If groundwater monitoring is required, then 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 **1<sup>st</sup> day of the second month after the quarter** (i.e. the January-March report is due by May 1<sup>st</sup>). The results of regular monthly monitoring reports for March, June, September and December may be incorporated into their corresponding quarterly monitoring report. The Quarterly Report shall include the following:

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 prepared as the December monthly monitoring report. The Annual Report will include all monitoring data required in the monthly and quarterly 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. If requested by staff, tabular and graphical summaries of all data collected during the year;
2. An evaluation of the performance of the wastewater treatment system, as well as a forecast of the flows anticipated in the next 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 Water Balance and Capacity Calculation Report that demonstrates adequate storage and disposal capacity to ensure full compliance with the WDRs. The water balance shall evaluate the settling ponds ability to provide sufficient capacity on a month-by-month basis. Include monthly evaporation, precipitation, percolation, estimated rate of sedimentation; identify contributions from major sources to monthly discharge volumes, stormwater runoff, and inflow and infiltration from the surrounding area. Rainfall shall be based on the 100-year return period total annual precipitation. Note the established maximum daily percolation rate cannot exceed four to ten percent of the minimum soil permeability and the evaporation rate cannot exceed 80 percent of the established pan evaporation rate for the area. For the purpose of this analysis, "full compliance" means maintaining two feet of freeboard in all ponds. Rainfall amounts shall be based on the total annual precipitation based on a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

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 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.

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The Discharger shall implement the above monitoring program as of **1 May 2012**.

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

gjc: 12 Apr-12