CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2011-____

FOR
BROWN SAND, INC. AND MOSSDALE ASSOCIATES, LTD.
BROWN SAND MOSSDALE QUARRY
SAN JOAQUIN COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring industrial wastewater. 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 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.

POND MONITORING

All ponds[1] shall be inspected weekly and monitored as follows:

Constituent/Parameter	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Freeboard	0.1 Feet	Measurement	Weekly	Quarterly
Berm Condition	Observation	Observation	Weekly	Quarterly
Electrical Conductivity	umhos/cm	Grab	Monthly	Quarterly
Fixed Dissolved Solids	mg/l	Grab	Quarterly	Quarterly
pH	Std. Units	Grab	Quarterly	Quarterly

GROUNDWATER MONITORING

Prior to construction of any new groundwater monitoring wells, the Discharger shall submit a Groundwater Monitoring Well Installation Workplan to the Central Valley Water Board for

[1] For the purposes of monitoring requirements, ponds are defined as any excavation deep enough to intersect the water table. Monitoring ponded stormwater that is not in contact with groundwater is not required.

review and approval. Groundwater monitoring shall occur in the first saturated zone with adequate groundwater to allow monitoring.

The groundwater monitoring well network shall be determined by an approved groundwater monitoring workplan and approved revisions thereafter. Any additional monitoring wells installed at the site shall be added to the monitoring well network unless the wells are required under another governmental order not related to the discharge of wastewater. Prior to sampling, the depth to groundwater shall be measured at each well to the nearest 0.01 foot, and each well shall be purged of at least three well volumes or until measurements of pH and electrical conductivity have stabilized. Samples shall be collected using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituent/Parameter	Units	Sampling Frequency [1]	Reporting Frequency
Depth to Groundwater	0.01 foot	Semi-Annually	Semi-Annually
Groundwater Elevation	0.01 foot	Semi-Annually	Semi-Annually
Groundwater Gradient	Feet/Feet	Semi-Annually	Semi-Annually
Groundwater Flow Direction	Map Bearing	Semi-Annually	Semi-Annually
pH	Std. Units	Semi-Annually	Semi-Annually
Electrical Conductivity	umhos/cm	Semi-Annually	Semi-Annually
Total Dissolved Solids	mg/L	Semi-Annually	Semi-Annually

[1] Semi-Annual samples shall be collected twice per year.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., pond, groundwater monitoring, 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 specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

A. Quarterly Monitoring Reports

Quarterly reports shall be submitted to the Central Valley Water Board on the **1st day of the second month after the quarter** (i.e. the January-March quarter is due by 1 May) each year. At a minimum, the reports shall include:

1. Results of the pond 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).
4. A discussion of the condition of the wastewater pond(s) storage capacity and any

changes made to the wastewater pond system.

5. Disposal of septage or other solid waste disposal.
6. A calibration log verifying calibration of all monitoring instruments and devices used to comply with the monitoring program.

B. Semi-Annual Monitoring Report

In addition to the quarterly report described above, the Discharger shall establish a semi-annual (twice per year) sampling schedule for groundwater monitoring such that samples are obtained approximately every six months. The data shall be included in semi-annual monitoring reports which shall be submitted to the Central Valley Water Board by the **1st day of the second month after the reporting period** (e.g. the January-June semi-annual report is due by August 1st). As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, groundwater monitoring reports shall be prepared under the supervision of a California licensed engineer or geologist. The Semi-Annual Report shall include the following:

1. Results of groundwater monitoring.
2. A scaled map showing relevant structures and features of the facility.
3. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities. 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.
5. A narrative discussion of the analytical results including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
6. A comparison of the monitoring data to 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.
9. Copies of laboratory analytical report(s). This submittal may be made on electronic media, appropriately labeled to indicate the associated monitoring report. If this option is selected, include a copy of the complete report (in portable document format (pdf) or equivalent) in the submittal.

C. Annual Monitoring Report

In addition to the monthly and semi-annual reports described above, an Annual Monitoring Report shall be submitted by **1 February of each year**. 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 Quarterly Monitoring Reports.

3. Tabular summaries of all monitoring data obtained during the previous year. Data showing trends, such as groundwater elevation or quality, shall be presented in graphs.

4. If applicable, 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. If recycled materials were not located on site, the report shall state that.

5. A map showing the current location of the wastewater pond locations. (As described in the Pond Monitoring section, for the purposed of monitoring requirements, ponds are defined as any excavation deep enough to intersect the water table.)

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.

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