CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2008-XXXX
FOR
CHARLES FULTON, CAROL FULTON, AND FULTON FAMILY TRUST
FOR OPERATION OF
FULTON RECLAMATION FACILITY, INC.
GLENN COUNTY

Compliance with this Monitoring and Reporting Program, and with the companion Standard Provisions and Reporting Requirements, is ordered by Waste Discharge Requirements (WDR) Order No. _____. Failure to comply with this Program, or with the Standard Provisions and Reporting Requirements dated 1 March 1991, constitutes noncompliance with the WDRs and with the California Water Code, which can result in the imposition of civil monetary liability.

A. WASTE MONITORING

The Discharger shall visually inspect and, using a bailer or similar device, collect a representative samples of each drilling mud load for the parameters described in Table 1. Loads containing brines or petroleum hydrocarbons shall be rejected.

Table 1

Drilling Mud Inspection and Application Parameters

Parameter	Units	Sampling Frequency	Reporting Frequency
Quantity accepted	Gal/CubicYards/ Truck loads	Each Truckload	Semiannual
Description of material	Consistency, color, abnormalities, etc.	Each Truckload	Semiannual
Source(s) and/or place of origin	N/A	Each Truckload	Semiannual
Drilling mud applied / treatment area remaining	Dry tons / percent remaining	Per field treated	Semiannual
pH	hydrogen ion	Each Truckload	Semiannual
Electrical Conductivity (EC)	µmhos/cm	Each Truckload	Semiannual
Total Dissolved Solids (TDS)	µg/L	Each Truckload	Semiannual
Petroleum Hydrocarbons and Brines	Visual (presence or absence)	Each Truckload	Semiannual

B. VADOSE ZONE MONITORING

The Discharger has installed a vadose zone monitoring network consisting of thirty 2.5-feet deep suction lysimeters, three 5-feet deep suction lysimeters, and two gypsum block arrays with moisture blocks installed at 3-feet, 5-feet, and 10-feet below ground surface. Unsaturated zone samples shall be collected from fourteen lysimeters (DL-U, DL-M, L-M/Un, L-M/Us, L-Aw, L-Cw, L-Fe, L-Jw, L-Ks, L-Le, L-Lw, L-Ln, 24%n, and 8%s) and analyzed in accordance with the detection monitoring program described in Table 2. All monitoring parameters shall be graphed to show historical trends at each monitoring point.

Semi-annually, the Discharger shall evaluate the vadose zone monitoring network and to determine if additional lysimeters are necessary to detect the parameters described in Table 2. A report of the findings shall be submitted in accordance with the schedule described in Table 2. A work plan for additional lysimeters shall be submitted to the Regional Water Board for review and approval prior to construction. Approved lysimeters shall be sampled and analyzed in accordance with Table 2.

C. GROUNDWATER MONITORING

The Discharger has installed ten compliance groundwater monitoring wells (MW-1 through MW-10) and two background monitoring wells (MW-11 and MW-12). Groundwater samples shall be collected from MW-1 through MW-12 and analyzed in accordance with the detection monitoring program described in Table 2.

The Discharger shall collate all groundwater sample results obtained previous to this Order with results collected pursuant to this Order to update the Water Quality Protection Standards (WQPS) developed for the Facility. Annually, the Discharger shall submit a Groundwater Assessment Report to establish whether the WQPS are being met. If annual sampling of "background" monitoring wells indicates significant water quality changes due to seasonal fluctuation or other reasons unrelated to waste management activities at the Facility, the Discharger may request modification of the WQPS.

Semi-annually, the Discharger shall evaluate the groundwater monitoring network and to determine if additional monitoring wells are necessary to detect the parameters described in Table 2. A report of the findings shall be submitted in accordance with the schedule described in Table 2. A work plan for additional monitoring wells shall be submitted to the Regional Water Board for review and approval prior to construction. Approved wells shall be sampled and analyzed in accordance with Table 2.

Table 2

Detection monitoring program

Parameter	Units	Sampling Frequency	Reporting Frequency
Field			
Groundwater Elevation	feet MSL	Semiannual	Semiannual
Gradient and Direction	ft/ft, degrees	Semiannual	Semiannual
pH	hydrogen ion	Semiannual	Semiannual
Temperature	°C or °F	Semiannual	Semiannual
Electrical Conductivity	µmhos/cm	Semiannual	Semiannual
COD	mg/L	Semiannual	Semiannual
TDS	mg/L	Semiannual	Semiannual
Standard Minerals			
Calcium	mg/L	Annual	Annual
Sodium	mg/L	Annual	Annual
Potassium	mg/L	Annual	Annual
Magnesium	mg/L	Annual	Annual
Iron	mg/L	Annual	Annual
Chloride	mg/L	Annual	Annual
Fluoride	mg/L	Annual	Annual
Nitrate as NO_3	mg/L	Annual	Annual
Nitrate as N	mg/L	Annual	Annual
Sulfate	mg/L	Annual	Annual
Carbonate	mg/L	Annual	Annual
Bicarbonate	mg/L	Annual	Annual
Trace Metals			
Arsenic	mg/L	Annual	Annual
Barium	mg/L	Annual	Annual
Boron	mg/L	Annual	Annual
Copper	mg/L	Annual	Annual
Total Chromium	mg/L	Annual	Annual
Lead	mg/L	Annual	Annual
Manganese	mg/L	Annual	Annual
Zinc	mg/L	Annual	Annual
Selenium	mg/L	Annual	Annual
Vanadium	mg/L	Annual	Annual

Note: Semiannual sampling events shall occur in February and August. Annual sampling events shall occur in February

D. FACILITY MONITORING

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess any damage to the drainage control system, vadose zone monitoring network, and groundwater monitoring wells. Any necessary construction, maintenance, or repairs shall be reported to the Regional Water Board, by **31 October**, with a description of the inspection results, photographs, proposed repairs, and implementation time schedule.

The Discharger shall also inspect all precipitation, diversion, and drainage controls for damage within **7 days** following *major storm events*. Major storm events are defined as 1.5 inches of accumulated rainfall in 24 hours. The Discharger shall report any damage and subsequent repairs **within 45 days of completion** of the repairs and include photographs of the repairs.

E. REPORTING

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program. The Discharger shall submit semiannual monitoring reports to the Regional Water Board by **30 September** and **30 March** of each year. Annual reports shall be submitted by **30 March** of each year.

In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, constituents, concentrations, and respective units are readily discernible. Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those, which cannot be quantified and/or specifically identified. The results of any monitoring done more frequently than required at the locations specified herein shall also be reported to the Regional Water Board.

The data shall be summarized in such a manner so as to illustrate clearly the compliance with WDRs or the lack thereof. All monitoring parameters shall be graphed to show historical trends at each monitoring point. Graphs for the same constituent shall be plotted at the same scale to facilitate visual comparison of monitoring data. A short discussion of the monitoring results, including notations of any water quality violations shall precede the tabular summaries. Data shall also be submitted in digital format annually.

Reports, which do not comply with the required format, will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the WDRs. The Discharger shall implement the above monitoring program on the effective date of this Order.

Ordered by:_____
PAMELA C. CREEDON, Executive Officer

_____
Date

KB: SAE
1/15/2008