

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2015-XXXX
FOR
E AND B NATURAL RESOURCES MANAGEMENT COMPANY
GOVERNMENT LEASE
POSO CREEK OIL FIELD
KERN COUNTY

Compliance with this Monitoring and Reporting Program is required pursuant to Water Code section 13267 as ordered by Cleanup and Abatement Order R5-2015-XXXX (the "CAO"). Failure to comply with this program constitutes noncompliance with the CAO and the Water Code, which can result in the imposition of civil liability. All sampling and analyses shall be by United States Environmental Protection Agency (USEPA) approved methods. The test methods chosen for detection of the constituents of concern shall be subject to review and concurrence by the California Regional Water Quality Control Board, Central Valley Region ("Central Valley Water Board").

A complete list of substances which are tested for and reported on by the testing laboratory shall be provided to the Central Valley Water Board. All peaks must be reported. In addition, both the method detection limit and the practical quantification limit shall be reported. Detection limits shall equal or be more precise than USEPA methodologies. Water samples must be analyzed within allowable holding time limits as specified in 40 CFR Part 136. All quality assurance/quality control (QA/QC) samples must be run on the same dates when samples were actually analyzed. Proper chain of custody procedures must be followed and a copy of the completed chain of custody form shall be submitted with the report. All analyses must be performed by a California Department of Public Health certified laboratory.

The Discharger shall maintain all sampling and analytical results: date, exact place, and time of sampling; dates analyses were performed; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Central Valley Water Board.

GROUNDWATER MONITORING

The Discharger shall operate and maintain a groundwater monitoring system that complies with the requirements of the CAO and is consistent with the detection monitoring requirements of section 20420 et seq. of Title 27, CCR, section 20005 et seq. (Title 27). The monitoring system shall be certified by a California-licensed professional civil engineer or geologist as being consistent with the detection monitoring requirements of Title 27. The Discharger shall revise the groundwater monitoring system (after review and approval by Central Valley Water Board staff) as needed to characterize the groundwater and to delineate the nature and extent of any release of waste constituents due to the operation of the surface impoundments (ponds) that are the subject of the CAO.

Groundwater samples shall be collected from groundwater monitoring wells and other sampling points established in accordance with the hydrogeological characterization required by the CAO. The collected samples shall be analyzed for the parameters and constituents listed in Table I in accordance with the specified methods and frequencies. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the Sample Collection and Analysis Plan approved by the Assistant Executive Officer.

INFLUENT MONITORING

Produced water samples shall be collected at a point in the system before discharge to the ponds. Time of collection of the sample shall be recorded. The collected produced water samples shall be analyzed for the parameters and constituents listed in Table I in accordance with the specified methods and frequencies. The Discharger shall collect, preserve, and transport produced water samples in accordance with the approved Sample Collection and Analysis Plan.

The Discharger shall record the volume of wastewater discharged to the ponds monthly. The wastewater volumes shall be reported in the quarterly monitoring reports.

FACILITY MONITORING

Permanent markers shall be in place with calibrations indicating the water level at design capacity and available operational freeboard. The freeboard shall be monitored on all ponds to the nearest tenth of a foot **monthly**.

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 repair and maintenance needed for: drainage control systems; slope failure; groundwater monitoring wells, or any change in site conditions that could impair the integrity of the waste management unit or precipitation and drainage control structures; and shall assess preparedness for winter conditions including, but not limited to, erosion and sedimentation control. The Discharger shall take photos of any problems areas before and after repairs. Any necessary construction, maintenance, or repairs shall be **completed by 31 October**. Annual facility inspection reporting shall be **submitted by 30 November**.

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage **within 7 days** following major storm events (e.g., a storm that causes continual runoff for at least one hour) capable of causing flooding, damage, or significant erosion. The Discharger shall take photos of any problems areas before and after repairs. Necessary repairs shall be completed **within 30 days** of the inspection. Notification and reporting requirements for major storm events shall be conducted as required in Reporting Requirements 2. of this MRP.

The Discharger shall monitor and record on-site rainfall data using an automated rainfall gauge. Data shall be used in establishing the severity of storm events and wet seasons for comparison with design parameters used for waste management unit design and conveyance and drainage design. Daily data and on-site observation shall be used for establishing the need for inspection and repairs after major storm events. Rainfall data shall be reported in the quarterly monitoring reports as required by this MRP.

REPORTING REQUIREMENTS

1. The Discharger shall report all monitoring data and information as specified herein. Reports that do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with this Monitoring and Reporting Program.
2. Quarterly groundwater monitoring and remediation system reports shall be submitted to the Central Valley Water Board according to the schedule below.

| <u>Monitoring Period</u> | <u>Report Due</u> |
|--------------------------|-------------------|
| January – March | April 30 |
| April – June | July 31 |
| July – September | October 31 |
| October – December | January 31 |

Each quarterly report shall include the following minimum information:

- (a) a description and discussion of the groundwater sampling event and results, including trends in the concentrations of waste constituents and groundwater elevations in the wells. If there are any deficiencies during the sampling event or if impacts to groundwater extend beyond recent historical boundaries, the report shall include an explanation and/or evaluation and propose options for addressing or correcting the deficiencies;
- (b) field logs that contain, at a minimum, water quality parameters measured before, during, and after purging, method of purging, depth of water, volume of water purged, etc.;
- (c) groundwater contour maps for all groundwater zones, if applicable;
- (d) waste constituent isoconcentration maps for all groundwater zones, if applicable;
- (e) a table showing well construction details that shall include, at a minimum, well number, groundwater zone being monitored, measuring point elevation, depth to top and bottom of screen, water level elevation, and depth to water;
- (f) cumulative data tables containing all historical water quality analytical results and depth to groundwater;
- (g) a copy of all laboratory analytical data reports;
- (i) results of any monitoring done more frequently than required at the locations specified in this Monitoring and Reporting Program or at other locations at the site shall be reported to the Central Valley Water Board;
- (j) a summary of any spills/releases that occurred during the quarter and tasks undertaken in response to the spills/releases;

- (k) an update and status on each of the outstanding tasks required by the CAO or Assistant Executive Officer;
 - (l) a map showing all wells on the facility;
3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized to demonstrate compliance with the requirements. All data shall be submitted in an electronic form acceptable to the Assistant Executive Officer.
 4. The Discharger shall submit an **annual report by 31 January** of each year for the preceding year. The report can be combined with the Discharger's fourth quarter report. The report shall contain:
 - a. Both tabular and graphical summaries of all data obtained during the year;
 - b. An in-depth evaluation of groundwater conditions at the site including short and long-term trends of the constituents of concern in each area of the site;
 - c. An evaluation of the effectiveness of the groundwater monitoring network in delineating the lateral and vertical extent of impacts to groundwater in all affected areas of the site. This needs to include an identification of any data gaps and potential deficiencies in the monitoring system or reporting program. The report shall include recommendations to address any deficiencies in the monitoring and report program;
 - d. An evaluation of the effectiveness of each of the remediation systems. The evaluation shall include the effectiveness of the systems in remediating impacted groundwater and each of the source areas or suspected source areas. The report shall include recommendations for improving or expanding the systems, if necessary;
 - e. A summary of the performance of each remediation system including the amount and percentage of operating and downtime, and the amount of petroleum hydrocarbons removed, if applicable; and
 - f. A summary of all spills/releases, if any, that occurred during the year, tasks undertaken in response to the spills, the results of the tasks undertaken.
 5. For each required quarterly and annual report, one report shall be submitted containing all monitoring data collected at the site by the Discharger and include all information cited in the above sections. A hard copy of all required reports on/or responses shall be submitted by the due date unless otherwise arranged with Central Valley Water Board staff.
 6. The Discharger may request that the Assistant Executive Officer change the monitoring frequency or constituents of concern after the first year of monitoring. The request needs to include a demonstration that adequate data has been collected to determine background groundwater conditions and a justification for the change.

6. The Discharger shall maintain a data base containing historical and current monitoring data in an electronic form acceptable to the Assistant Executive Officer. The data base shall be updated quarterly and provided to the Central Valley Water Board in electronic format.
7. The Discharger shall submit electronic copies of all workplans, reports, analytical results, and groundwater elevation data over the Internet to the State Water Board Geographic Environmental Information Management System database (GeoTracker) at <http://geotracker.swrcb.ca.gov>. Electronic submittals shall comply with GeoTracker standards and procedures as specified on the State Water Board's web site. Uploads to Geotracker shall be completed on or prior to the due date. In addition, a hardcopy of each document shall be submitted to:

California Regional Water Quality Control Board
Central Valley Region
1685 E Street, Suite 200
Fresno, CA 93706
Attn: Ron Holcomb
Geotracker Site ID: **T10000006597**

8. A transmittal letter explaining the essential points shall accompany each report. At a minimum, the transmittal letter shall identify any violations found since the last report was submitted, and if the violations were corrected. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. The transmittal letter shall also state that a discussion of any violations found since the last report was submitted, and a description of the actions taken or planned for correcting those violations, including any references to previously submitted time schedules, is contained in the accompanying report. The transmittal letter shall contain a statement identical to that required by the CAO 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 program on the effective date of this Program.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

(Date)