

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER NO. R5-2006-0111  
FOR  
COFFEE PETROLEUM, INC.  
COFFEE LEASE  
ROUND MOUNTAIN OIL FIELD, KERN COUNTY

This Order is issued to Coffee Petroleum, Inc. (hereinafter Discharger) based on provisions of California Water Code (hereinafter Water Code) Section 13304, which authorize the California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board) to issue a Cleanup and Abatement Order (CAO) and Water Code Section 13267, which authorizes the Regional Water Board to require preparation and submittal of technical and monitoring reports.

The Regional Water Board finds, with respect to the Discharger's acts or failure to act, the following:

**BACKGROUND**

1. The Discharger owns and operates the Coffee Lease in the Pyramid-Coffee Canyon Area of the Round Mountain Oil Field, approximately six miles northeast of the City of Bakersfield.
2. The Coffee Lease includes 145.36 acres in the NW<sup>1</sup>/<sub>4</sub> Section 8, T28S, R29E, MDB&M (Assessor Parcel No. 093-250-26-4), as shown on Attachment A, which is made part of this CAO.
3. The Discharger owns and operates crude oil production wells and four unlined surface impoundments, generally known in the industry as sumps, at the Coffee Lease. The sumps are used for the disposal of non-hazardous oilfield production wastewater through percolation and solar evaporation.
4. Waste Discharge Requirements (WDRs) Resolution No. 58-375, which is outdated and not in compliance with current guidelines and regulations, was issued for a discharge at the Coffee Lease. The WDRs were issued in 1958 to Chanslor-Western Oil and Development Company.
5. In June 1971, the Regional Water Board adopted Resolution No. 71-122 (*Interim Water Quality Control Policy for Ground and Surface Waters in the Poso Creek Subarea*). The Resolution and the accompanying California Department of Water Resources (DWR) *Report of Poso Creek Water Quality Evaluation, Kern County* state that the greatest water quality problem for the 'Poso Creek Subarea' is that of increasing salinity in groundwater resulting from the discharge of oil field wastewater. The DWR report described wastewaters originating from the Mt. Poso, Round Mountain, Poso Creek, and Kern Front oilfields. The maximum salinity limits of electrical conductivity (EC) @ 25 °C, 1,000 µmhos/cm; chloride, 200 mg/L; and, boron, 1.0 mg/L were established in the 1971 Resolution for oilfield produced wastewater discharged to Poso Creek and to facilities within the subarea such as unlined sumps. The stated intent of the Water Board in adopting the numerical limitations was to "*provide controls for factors affecting the quality of ground and surface waters in the Poso Creek Subarea of Kern County.*" The DWR recommendations included revision of all WDRs for discharges of oilfield-produced wastewater in the subarea to include maximum salinity limitations.
6. In the early 1970's, oilfield operators located in the Poso Creek subarea were notified about adoption of the interim water quality control policy and requested to achieve compliance. In 1974 and 1975, oil field operators in the Poso Creek subarea were issued revised WDRs requiring

compliance with the interim policy. There is no record of revised WDRs being issued for any operator of the Coffee Lease.

7. In 1975, the Regional Water Board adopted the first basin plan entitled *Water Quality Control Plan Report Tulare Lake Basin (5D)*, which contains maximum salinity limits for the disposal of oilfield produced wastewater in unlined sumps overlying groundwater with existing and future probable beneficial uses. The maximum concentration limits were: EC @ 25° C, 1,000 µmhos/cm; chloride, 200 mg/L; and, boron, 1 mg/L.
8. In 1995, the Regional Water Board adopted the *Water Quality Control Plan for the Tulare Lake Basin, Second Edition - 1995* (Basin Plan), which designates beneficial uses of the waters of the State, establishes water quality objectives, and establishes policies to implement water quality objectives. To protect the beneficial uses of groundwater and prevent its degradation, the Basin Plan contains maximum salinity limits for the disposal of oilfield produced wastewater in unlined sumps overlying groundwater with existing and future probable beneficial uses. The maximum concentration limits are: EC @ 25° C, 1,000 µmhos/cm; chloride, 200 mg/L; and, boron, 1 mg/L.
9. Table II-1 in the Basin Plan lists the beneficial uses of surface water. The table designates Poso Creek waters as having beneficial uses that include: agricultural supply; water contact and non-contact water recreation; warm freshwater habitat; cold freshwater habitat; wildlife habitat; freshwater replenishment; and, groundwater recharge.
10. Table II-2 in the Basin Plan lists the beneficial uses of groundwater. The Coffee Lease is in the Kern County Basin Hydrologic Unit and the 257 Detailed Analysis Unit, which has the following designated or actual beneficial uses of groundwater: municipal and domestic supply, agricultural supply, and industrial service supply.

### **HYDROGEOLOGIC INFORMATION**

11. Lithologic units at the Coffee Lease include the Miocene Olcese Sand and the Quaternary Poso Creek alluvium. Poso Creek alluvium unconformably overlies the Olcese Sand and consists of unconsolidated sand, gravel, silt, and clay deposited by Poso Creek. The Olcese Sand consists of three lithologic units with the lower and upper units being marine sandstone and the middle unit nonmarine sandstone.
12. The three sumps are on the Olcese Sand and approximately 200 feet north of the Poso Creek alluvium. The fourth sump is on the Poso Creek alluvium.
13. According to information from the California Division of Oil, Gas, and Geothermal Resources (CDOGGR), faults near or on the Coffee Lease include the Poso Creek, Coffee Canyon, and Kern River. A small branch of the Kern River fault crosses the Coffee Lease just to the southwest of the sumps and the Kern River fault crosses the Coffee Lease to the northeast of the sumps and producing wells. The *Fault Activity Map of California (1994)* indicates that the Poso Creek fault cuts strata of Pleistocene age, and the Kern River fault (shown as the Kern Gorge fault on the fault activity map) cuts strata of Late Quaternary age. The nearest Holocene fault with historic activity is the Kern Front fault approximately eight miles west-southwest of the Coffee Lease. There is no

geologic information demonstrating that any fault on the Coffee Lease restricts the lateral movement of groundwater.

14. At the former Chemical Waste Management, Incorporated, Bakersfield Facility, three monitoring wells (PC-05, PC-06, and MW-5) are completed in the Poso Creek alluvium. During the period between 1989 through 2004, depth to groundwater ranged between 2.1 and 15.5 feet. During the third quarter of 2004, groundwater samples from these wells had the following characteristics:

<u>Parameter</u>	<u>Concentration Ranges</u>
Total Dissolved Solids (TDS)	230 to 870 mg/L
Chloride	15 to 170 mg/L
Sodium	30 to 190 mg/L
Sulfate	29 to 210 mg/L
Calcium	32 to 63 mg/L

15. The Discharger operates two groundwater supply wells at the Coffee Lease. One well was sampled by the Discharger in September 1999 and had the following characteristics:

<u>Parameter</u>	<u>Concentration</u>
EC @ 25° C	1,060 µmhos/cm
TDS	780 mg/L
Chloride	30 mg/L
Sodium	81 mg/L
Sulfate	289 mg/L
Calcium	119 mg/L

16. The Poso Creek stream channel, having a floodplain 600 to 1,000 feet wide, traverses the Coffee Lease. Seasonal water flow occurs in Poso Creek from snowmelt and rainfall runoff in the Greenhorn Mountains. Poso Creek flows west into the San Joaquin Valley and to the Kern National Wildlife Refuge approximately 45 miles northwest of the Coffee Lease.

17. Water samples were collected from Poso Creek by Regional Water Board staff on 25 May 2006. As shown on Attachment A, a water sample was collected upstream from the sumps and a second sample was collected downstream from the sumps. The samples had the following characteristics:

<u>Parameter</u>	<u>Concentrations</u>	
	<u>Upstream Sample</u>	<u>Downstream Sample</u>
EC @ 25° C	200 µmhos/cm	210 µmhos/cm
TDS	150 mg/L	160 mg/L
Chloride	6.7 mg/L	7.6 mg/L
Sodium	15 mg/L	16 mg/L
Sulfate	7.5 mg/L	8.7 mg/L
Calcium	23 mg/L	24 mg/L
Boron	Not Detected	Not Detected

18. Wastewater discharged onto the Poso Creek alluvium has the potential to migrate vertically and degrade groundwater contained within the Poso Creek alluvium. Groundwater in the Poso Creek alluvium is in hydraulic continuity with, and is recharged by, seasonal water flow in Poso Creek.

### WASTEWATER CHARACTERISTICS

19. Approximately 139,900 barrels (5.88 million gallons) of non-hazardous wastewater was discharged to the sumps during the 12-month period ending on 30 April 2006.
20. During May 1999 and May 2005, wastewater flowing into the sumps was sampled by Regional Water Board staff and analytical results indicated the following characteristics:

<u>Parameter</u>	<u>Concentration</u>	
	May 2005	May 1999
EC at 25° C	2,000 µmhos/cm	2,200 µmhos/cm
TDS	1,100 mg/L	Not Measured
Chloride	420 mg/L	420 mg/L
Boron	1.2 mg/L	1.6 mg/L

21. During September 2001, Regional Water Board staff observed wastewater being used to irrigate numerous rows of trees planted on the Coffee Lease and to the north of the sumps. Regional Water Board staff requested a technical report describing the concept of salt uptake by the trees from the wastewater. No report was ever submitted. During May 2005, Regional Water Board staff observed that most of the trees had failed to survive and the few remaining had not grown significantly since September 2001.
22. During January 2003 and June 2004, Regional Water Board staff observed wastewater flowing from one of the sumps into a ditch. The ditch conveys wastewater to the southwest to a steel pipeline beneath the access road. Wastewater was observed discharging from the pipeline onto Poso Creek alluvium between the access road and Poso Creek (Attachment A).
23. During May 2005, Regional Water Board staff observed wastewater discharging to the ground from a black poly pipeline extending from one of the three sumps to a location on the Coffee Lease approximately 1,000 feet to the west (Attachment A). Analytical results of a wastewater sample collected by Regional Water Board staff indicated the following characteristics:

<u>Parameter</u>	<u>Concentration</u>
EC at 25° C	2,100 µmhos/cm
TDS	1,200 mg/L
Chloride	450 mg/L
Boron	1.2 mg

24. The wastewater discharges described in Findings No. 19 through 23 have EC and chloride concentrations that exceed, by a factor of two or more, the Basin Plan numerical limitations. The wastewater discharges have the potential to migrate to and degrade groundwater in the Olcese

Sand and/or to migrate to and degrade groundwater in the Poso Creek alluvium. The discharges are a significant threat to waters of the state.

25. The Discharger is disposing of oilfield production wastewater into unlined sumps directly adjacent to Poso Creek. No other oilfield operators are known to be discharging wastewater near Poso Creek.
26. Prior to the Discharger assuming ownership of the Coffee Lease in 1998, it was informed by Regional Water Board staff that the wastewater salinity concentrations exceeded the Basin Plan numerical limits and needed to be brought into compliance with the Basin Plan and regulations. Subsequently, between November 1998 and May 2005, Regional Water Board correspondence referenced that wastewater discharges with salinity concentrations that exceed the Basin Plan numerical limitations need to be brought into compliance.

#### **AUTHORITY – LEGAL REQUIREMENTS**

27. Section 13173 (b) of the Water Code states that non-hazardous waste containing pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state is defined as “Designated Waste.”
28. Section 20005, et seq. of Title 27 California Code of Regulations (hereinafter Title 27), specifies that sumps used for the disposal of designated waste are required to be constructed in accordance with prescriptive criteria for Class II surface impoundments. The sumps used at the Coffee Lease for the disposal of wastewater classified as designated waste do not meet the prescriptive construction criteria for Class II surface impoundments as specified by Title 27.
29. Alternatives to the discharge of wastewater to unlined sumps can include: (a) discharge to sumps that are constructed in accordance with prescriptive criteria for Class II surface impoundments as specified in Title 27; or (b) disposal of wastewater at a permitted waste disposal facility; or (c) subsurface injection into a Class II injection well permitted by CDOGGR.
30. The method of achieving compliance is at the discretion of the Discharger. The Discharger has submitted and the CDOGGR approved an injection disposal well project on 6 February 2006.
31. The State Water Resources Control Board (hereinafter State Water Board) has adopted Resolution No. 92-49, the *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304*. The Resolution sets forth the policies and procedures to be used during an investigation or cleanup of a contaminated or polluted site and requires that cleanup standards be consistent with State Water Board Resolution 68-16, the *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Resolution 92-49 and the Basin Plan establish the cleanup levels to be achieved. Resolution 92-49 requires the waste to be cleaned up to background, or if that is not reasonable, to an alternative level that is the most stringent level that is economically and technologically feasible in accordance with Section 2550.4 of Title 23 California Code of Regulations (CCR). Any alternative cleanup level to background must (1) be consistent with the maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of such

water; and (3) not result in water quality less than that prescribed in the Basin Plan and applicable Water Quality Control Plans and Policies of the State Water Board.

32. Section 13304(a) of the Water Code states that:

*“Any person who has discharged or discharges waste into waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts. A cleanup and abatement order issued by the state board or a regional board may require the provision of, or payment for, uninterrupted replacement water service, which may include wellhead treatment, to each affected public water supplier or private well owner. Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant.”*

33. Section 13304 (c)(1) of the Water Code states, in part, that:

*“...the person or persons who discharged the waste, discharges the waste, or threatened to cause or permit the discharge of the waste within the meaning of subdivision (a), are liable to that government agency to the extent of the reasonable costs actually incurred in cleaning up the waste, abating the effects of the waste, supervising cleanup or abatement activities, or taking other remedial actions...”*

34. Section 13267(b)(1) of the Water Code states that:

*“In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”*

35. Section 13268 of the Water Code states, in part, that:

*(a)(1) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying any information*

*provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b). and,*

*(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.*

36. Section 13350 of the Water Code states, in part, that:

*(a) Any person who (1) violates any cease and desist order or cleanup and abatement order hereafter issued, reissued, or amended by a regional board or the state board, or (2) in violation of any waste discharge requirement, waiver condition, certification, or other order or prohibition issued, reissued, or amended by a regional board or the state board, discharges waste, or causes or permits waste to be deposited where it is discharged, into the waters of the state, or (3) causes or permits any oil or any residuary product of petroleum to be deposited in or on any of the waters of the state, except in accordance with waste discharge requirements or other actions or provisions of this division, shall be liable civilly, and remedies may be proposed, in accordance with subdivision (d) or (e) . . .*

*(e) The state board or a regional board may impose civil liability administratively pursuant to Article 2.5 (commencing with Section 13323) of Chapter 5 either on a daily basis or on a per gallon basis, but not both.*

*1. The civil liability on a daily basis may not exceed five thousand dollars (\$5,000) for each day the violation occurs . . .*

*(B) When there is no discharge, but an order issued by the regional board is violated, except as provided in subdivision (f), the civil liability shall not be less than one hundred dollars (\$100) for each day in which the violation occurs.*

#### **DISCHARGER LIABILITY**

37. As described in Findings 19-26, the Discharger is subject to an order pursuant to Water Code Section 13304 because the Discharger owns or operates a facility that has caused or permitted waste to be discharged or deposited in violation of the Basin Plan, where it has discharged to waters of the state and has created, or continues to threaten to create, a condition of pollution or nuisance. The issuance or adoption of a cleanup or abatement order pursuant to Water Code Section 13304 is appropriate and consistent with policies of the Regional Water Board.
38. The Order requires investigation and cleanup of the site in compliance with the Water Code, the applicable Basin Plan, and other applicable plans, policies, and regulations.
39. As described in Finding No. 32, the Discharger is subject to an order pursuant to Water Code Section 13267 to submit technical reports because existing data and information indicate that wastewater exceeding the numerical limitations contained in the Basin Plan has been discharged or is discharging into the unlined sumps owned and operated by the Discharger in this Order, Coffee Petroleum, Inc., its agents, successors, and assigns. The technical reports required by this CAO are necessary to assure compliance with Section 13304 of the Water Code.

40. As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, have appropriate reports prepared by, or under the supervision of, a California registered professional engineer or geologist and signed by the registered professional. All technical reports submitted by the Discharger shall include a statement signed by the authorized representative certifying under penalty of law that the representative has examined and is familiar with the report and that to his knowledge, the report is true, complete, and accurate.
41. If, for any reason, the Discharger is unable to perform any activity or submit any document in compliance with the schedule set forth herein, the Discharger may request, in writing, an extension of the time specified. The extension request shall include an explanation why the specified date could not or will not be met and justification for the requested period of extension. Any extension request shall be submitted as soon as the situation is recognized and no later than the compliance date. An extension may be granted by revision of this Order or by a letter signed by the Executive Officer.
42. Sections 3890-3895 of Title 23 CCR, require submittal of analytical data electronically via the internet, using approved electronically deliverable format, to the State Water Board Geographic Environmental Information Management System database (GeoTracker).
43. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this CAO, the Executive Officer may pursue further enforcement, including making a referral to the Attorney General for judicial enforcement or issuing a complaint for administrative civil liability. The Regional Water Board reserves its right to take any enforcement actions authorized by law.
44. If the Discharger violates this CAO, then the Discharger may be liable civilly in a monetary amount provided by the Water Code.
45. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), pursuant to Title 14 CCR, Section 15321(a)(2). The implementation of this Order is also an action to assure the restoration of the environment and is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), in accordance with Title 14 CCR, Section 15308 and 15330.
46. Sections 2050-2068, Title 23 CCR, provide that any person affected by this action of the Regional Water Board may petition the State Water Board to review the action. The State Water Board must receive the petition within 30 days of the date of this CAO. The regulations applicable to filing petitions will be provided upon request or are available at:  
[www.waterboards.ca.gov/water\\_laws/index.html](http://www.waterboards.ca.gov/water_laws/index.html).

### REQUIRED ACTIONS

**IT IS HEREBY ORDERED** that Resolution No. 58-375 is rescinded and, pursuant to Water Code Sections 13304 and 13267, and Resolution No. 92-49 *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304*, and with the Regional Water Board's *Water Quality Control Plan for the Tulare Lake Basin, Second Edition - 1995*, Coffee Petroleum, Inc. and its agents, successors, and assigns shall cleanup waste and abate forthwith the



conditions caused by the discharges. "Forthwith" means as soon as reasonably possible, but in any event no later than the compliance dates below. More specifically, the Discharger shall complete the following:

### **Time Schedule for Completing Tasks**

1. The Discharger shall immediately **cease all unpermitted discharges of wastewater on or off the Coffee Lease in violation of the Basin Plan**. This proscription does not apply to discharges to Class II injection well(s) as permitted by the CDOGGR.
2. By **30 November 2006**, the Discharger shall submit to the Executive Officer for approval, a **Compliance Plan** describing a wastewater disposal program that will result in compliance with the Basin Plan and this Order. The plan must set forth the tasks needed to implement the disposal program and include a time schedule to complete the tasks.
3. By **28 February 2007**, the Discharger shall complete implementation of the approved Compliance Plan and submit a **Compliance Report** describing implementation of the *Plan*.
4. By **30 April 2007**, the Discharger shall submit to the Executive Officer for approval, a detailed **Sump Closure Plan** describing the process to close the sumps. The plan must set forth the tasks needed to close the sumps and include a time schedule to complete the tasks.
5. By **31 August 2007**, the Discharger shall complete implementation of the approved Sump Closure Plan and submit a **Closure Certification Report** certifying closure of the sumps. The Closure Certification Report shall contain all engineering data, test results, and soil and wastewater analyses collected during sump closure.

### **General Requirements**

Reference herein to determinations and considerations to be made by the Regional Water Board regarding the terms of the Order shall be made by the Executive Officer. Decisions and directives made by the Executive Officer in regards to this Order shall be as if made by the Regional Water Board.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region on 26 October 2006.

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PAMELA C. CREEDON, Executive Officer

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26 October 2006

(Date)

