

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401**

WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2004-0141

Waste Discharger Identification No. 271039002

For

**CHEVRONTEXACO SAN ARDO OILFIELD
WATER MANAGEMENT FACILITY
Monterey County**

The California Regional Water Quality Control Board, Central Coast Region (hereafter Board), finds that:

1. ChevronTexaco Exploration and Production Company (hereafter Discharger) owns and operates a gas and oil production facility in the San Ardo Oil Field (as shown on *Attachment A – Location Map*) that generates produced water, which is formation water unavoidably extracted during oil and gas production.
2. To regulate the discharge of treated produced water to the Salinas River and to land, the Regional Board adopted Waste Discharge Requirements Order No. 99-81 (NPDES Permit No. CA0049832), which included an expiration date of September 10, 2004.
3. To continue the discharge, Mr. David Bowers, the Discharger's Western California Area Manager, filed a December 15, 2003 report of waste discharge in accordance with Title 23, Division 3, Chapter 9, of the California Code of Regulations. The report of waste discharge explicitly excluded a surface water discharge and proposed only a discharge to land of treated produced water.
4. Although the Discharger could legally discharge treated, produced water to land or the Salinas River under Order No. 99-81, the Discharger opted to inject produced water back into the San Ardo Oilfield petroleum reservoirs using Class II injection wells that are regulated by the Department of Conservation, Division of Oil, Gas, and Geothermal Resources under provisions of the state Public Resources Code and the federal Safe Drinking Water Act.
5. This Order updates Order No. 99-81 by terminating the previous NPDES authorization and regulating the current water management facility's proposed industrial discharge to land.
6. As shown in *Attachment "B" - Flow Diagram*, Treatment consists of:
 - Oil and solids removal
 - Degasification
 - Warm lime softening
 - Multi-media filtration
 - Ion exchange softening
 - Two-pass reverse osmosis (RO)
 - Sodium adsorption ratio (SAR) adjustment
7. The water treatment facility has an average daily flow of 2.1 million gallons per day (MGD) and a maximum capacity of 6.3 MGD.
8. After treatment, the wastewater will flow through a constructed post-treatment, free-water surface wetland area to provide hydraulic equalization and pre-discharge quality assurance.
9. Discharge to designated shallow groundwater recharge basins in the San Ardo Oilfield, an industrial area, occurs in nearly level, alluvial soils, as shown in *Attachment "C" – Site Plan*.
10. Groundwater data from wells located within the San Ardo oilfield indicate groundwater at 10 to 20 feet below ground surface, flowing north-northwest down the Salinas Valley, with water quality typical of the Upper Salinas Valley Aquifer.

11. The nearest water supply wells are owned by the discharger and are more than ¼-mile cross-gradient from the designated disposal area.
12. The Water Quality Control Plan, Central Coastal Basin (Basin Plan) was adopted by the Regional Board on September 8, 1994, and approved by the State Water Resources Control Board on November 17, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of the State's Waters.
13. For the groundwater beneath the designated shallow groundwater recharge basins, the Basin Plan lists the following existing and anticipated beneficial uses:
 - a. Municipal Supply;
 - b. Agricultural Supply;
 - c. Industrial Process Supply;
 - d. Industrial Service Supply;
14. The nearest surface water is the Salinas River. The Basin Plan lists the following existing and anticipated beneficial uses of the Salinas River in the vicinity of the discharge:
 - a. Municipal Supply;
 - b. Water Contact Recreation;
 - c. Non-Contact Water Recreation;
 - d. Industrial Process Supply;
 - e. Industrial Service Supply;
 - f. Ground Water Recharge;
 - g. Contact and Non-Contact Water Recreation;
 - h. Wildlife Habitat;
 - i. Fish Migration;
 - j. Warm and Cold Water Habitat;
 - k. Agricultural Supply;
 - l. Fish Spawning and Reproduction; and,
 - m. Rare, Threatened or Endangered Species Habitat.
15. Adjacent property uses include agricultural fields located north of the project site, San Ardo oil field properties east and south of the project site, and the Salinas River and additional oil field properties west of the project site. The project site is currently zoned for heavy industrial uses.
16. The Discharger, being an operator of an existing or new discharge composed entirely of storm water from an oil or gas exploration, production, processing, or treatment operation, or transmission facility, is not required to submit an industrial stormwater permit application in accordance with 40CFR. §122.26 (c)(1)(i) because the Discharger has not:
 - a. had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or
 - b. had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or
 - c. contributed to a violation of a water quality standard.
17. Sludge wastes will be characterized and disposed of in an appropriate landfill. Reverse osmosis, filter backwash water, and membrane cleaning solutions will be disposed of via the discharger's existing Aurignac and Lombardi Class II disposal wells located in the North Field area. Additional Class II disposal wells in the main part of the field may be permitted and used in the future.
18. The Monterey County Planning Department completed an Initial Study and certified a Negative Declaration for the project in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) and the California Code of Regulations on October 13, 2004. The county determined there are no significant adverse environmental effects or that all potentially significant adverse effects can be avoided through implementation of mitigation measures. Mitigation measures to prevent nuisance and ensure protection of beneficial uses of surface and ground waters will be implemented through this order.
19. Discharge of waste is a privilege, not a right, and authorization to discharge is conditional

upon the discharge complying with provisions of Division 7 of the California Water Code and any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance.

20. On September 8, 2004, the Regional Board notified the Discharger and interested parties of its intent to issue waste discharge requirements for the discharge and has provided them with a copy of the proposed Order and an opportunity to submit written views and comments.
21. After considering all comments pertaining to this discharge during a public hearing on December 3, 2004, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED, pursuant to authority in Sections 13263 and 13267 of the California Water Code that ChevronTexaco, its agents, successors, and assigns, may discharge waste at the above-described Facility providing compliance is maintained with the following:

(Other prohibitions and conditions, definitions, and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated January 1984.)

These requirements include the following footnotes, which indicate the requirement's source:

BP; Basin Plan

CWC; California Water Code

ROWD; *Report of Waste Discharge*

CL; Continued limit from previous waste discharge requirements

SP; Standard Provisions & Reporting Requirements without footnotes; based on staff's professional judgement.

A. PROHIBITIONS

- Waste discharges not specifically regulated under this Order are prohibited.^{BPJ}
- Discharge of treated produced water to areas other than the designated shallow groundwater recharge basins identified in the Discharger's

December 15, 2003 report of waste discharge and shown in Attachment "C" – Site Plan, is prohibited.^{ROWD, CWC}

- Discharge of waste classified as 'hazardous,' as defined in section 2521(a) of Title 23, CCR, section 2510 et seq., or 'designated,' as defined in CWC section 13173, is prohibited.^{ROWD}
- Bypass of the treatment facility and discharge of untreated or partially treated wastes directly to the designated shallow groundwater recharge basins is prohibited.^{ROWD}
- Discharge of uncontaminated storm waters, except storm waters dropping directly into the treatment facilities, is prohibited.^{BPJ}
- Creation of a condition of pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code (CWC), is prohibited.^{CWC}
- The discharge of radioactive substances is prohibited.^{BP}

B. EFFLUENT LIMITATIONS

- Wastewater discharged to designated shallow groundwater recharge basins shall not exceed the following limits:^{BP}

Constituent	Daily Maximum (mg/L)
Total Dissolved Solids	600
Sodium	100
Chloride	150
Sulfate	150
Nitrate (as N)	5
Boron	0.75

- The discharge shall not exceed a 30-day average daily flow of 2.1 million gallons per day (MGD) or a maximum daily flow capacity of 6.3 MGD.^{ROWD}

- 3. The discharge shall maintain an adjusted sodium adsorption ratio (SAR adj.) range of 0 - 6.5^{BP}.
- 4. The discharge shall not have a pH less than 6.5 or greater than 8.4^{BP}.

C. RECEIVING WATER LIMITATIONS

(Receiving water quality is a result of many factors, some unrelated to the discharge. This order considers these factors and is designed to minimize the discharge's influence on the receiving water.)

- 1. The discharge shall not cause concentrations downgradient of the disposal area to exceed the following:^{BP}

Constituent	Daily Maximum (mg/L)
Total Dissolved Solids	600
Sodium	70
Chloride	150
Sulfate	150
Nitrogen (as N)	5
Boron	0.5

- 2. The discharge shall not cause groundwaters to contain taste or odor producing substances in concentrations that adversely affect beneficial uses.^{BP}
- 3. The discharge shall not cause a significant increase of mineral or organic constituents as determined by comparison of samples collected from monitoring wells, screened over the same continuous aquifer as the recharge wells, located upgradient and downgradient of the disposal area.^{CL}
- 4. The discharge shall not cause radionuclides to be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life; or cause concentrations of chemicals and radionuclides in ground water to exceed limits set forth in Title 22, Chapter 15, Articles 4, 4.5,

5, and 5.5 of the California Code of Regulations.^{BP}

- 5. The discharge shall not cause the median concentration of coliform organisms over any seven-day period to be less than 2.2/100 ml.^{BP}
- 6. The discharge shall not cause groundwaters to contain concentrations of organic chemicals in excess of the limiting concentrations set forth in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5.5, Section 64444.^{BP}
- 7. The discharge shall not cause groundwaters to contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Chapter 15, Article 4, Section 64431.^{BP}
- 8. The discharge shall not cause groundwaters to contain concentrations of chemical constituents in amounts that adversely affect the agricultural supply beneficial use. Interpretation of adverse effect shall be as derived from the University of California Agricultural Extension Service guidelines provided the Basin Plan's Table 3-3.^{BP}
- 9. No controllable water quality factor shall degrade the quality of any groundwater resource or adversely affect long-term soil productivity. The salinity control aspects of groundwater management will account for effects from all sources.

D. PROVISIONS

- 1. Order No. 99-81, "Waste Discharge Requirements for Texaco Exploration & Production Company Inc. San Ardo Reclamation Plant, Monterey County," adopted by the Regional Board on September 8, 1999, is hereby rescinded.
- 2. Discharger shall comply with "Monitoring and Reporting Program No. R3-2004-0141," as ordered by the Executive Officer.
- 3. The Discharger shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements for

Waste Discharge Requirements,” dated January 1984.

4. All discharges from the Facility shall comply with lawful requirements of the municipalities, counties, irrigation districts, drainage districts, and other local agencies regarding discharges of water to other watercourses under their jurisdiction.
5. The Discharger shall give advance notice to the Regional Board of any planned changes in the permitted facility or waste management activities that may result in noncompliance with this Order.
6. This Order may be reopened to address any changes in State or Federal plans, policies, or regulations that would affect the quality requirements for the discharges.
7. In the event of any change in control or ownership of land or facilities presently owned or utilized by the Discharger, the Discharger shall notify the succeeding owner(s) or operator(s) of the existence of this Order by

letter, a copy of which shall be forwarded to the Regional Board.

8. Pursuant to Title 23, Chapter 3, Subchapter 9, of the California Administrative Code, the Discharger must submit a written report to the Executive Officer, not later than June 3, 2019, addressing:
 - a. Whether there will be changes in the continuity, character, location, or volume of the discharge;
 - b. Whether, in their opinion, there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision; and
 - c. A summary of all violations of Waste Discharge Requirements, Order No. R3-2004-0141, which occurred since adoption of the order along with a description of the cause(s) and corrective action taken.

I, Roger W. Briggs, 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 Coast Region, on December 3, 2004.

Roger W. Briggs, Executive Officer