

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

**STAFF REPORT FOR REGULAR MEETING OF MAY 9, 2008
Prepared March 21, 2008**

ITEM NUMBER: 18

SUBJECT Issuance of Waste Discharge Requirements/NPDES Permit for Plains Exploration and Production, Arroyo Grande Produced Water Reclamation Facility, San Luis Obispo County--Order No. R3-2008-0004, NPDES Permit No. CA0050628

KEY INFORMATION

Location: 1821 Price Canyon Road, San Luis Obispo, CA 93401
Type of Waste: Oil recovery produced water
Proposed Capacity: 0.84 million gallons per day (MGD)
Proposed Treatment: Lime softening, filtration, strong-acid cation exchange softening, cooling, two-pass reverse osmosis, and air stripping
Disposal: Pismo Creek (approximately four miles from Pacific Ocean)
This Action: Adopt Waste Discharge Requirements Order No. R3-2008-0004

SUMMARY

The proposed NPDES Permit, Waste Discharge Requirements Order No. R3-2008-0004 for Plains Exploration and Production, Arroyo Grande Produced Water Reclamation Facility, authorizes discharge of treated produced water to Pismo Creek. The proposed requirements reflect applicable statewide regulations, primarily the National Toxics Rule, California Toxics Rule and State Implementation Policy, and the Water Quality Control Plan, Central Coast Basin (Basin Plan). The proposed Order also reflects the statewide standardized permit format. This standardized format includes a Fact Sheet (Attachment F of the Order) detailing the basis for requirements specified in the Order and Monitoring Program. The standardized permit format also includes Definitions and Standard Provisions consistent with permits issued throughout the Central Coast Region.

DISCUSSION

Purpose of Proposed Order: Order No. R3-2008-0004 is proposed Waste Discharge Requirements (WDR) for the Plains Exploration and Production (PXP) Arroyo Grande Produced Water Reclamation Facility, San Luis Obispo County. The proposed Order is based on the federal Clean Water Act as it applies to oil production facility discharges.

The proposed Order implements discharge requirements specified in the California Water Code; National Toxics Rule; California Toxics Rule; State Implementation Policy; the Basin Plan; and those based on staff's best judgment, specifically designed to protect beneficial uses of Pismo Creek. The source of each specific requirement is described in the Fact Sheet (Attachment F of the proposed Order).

Facility Description: PXP generates produced water during its oil recovery processes. Historically, the produced water has been used as heat treatment in the extraction process and re-injected into the oil-bearing formation. However, alternate disposal methods are needed to improve efficiency of the production field and meet increased produced water (wastewater) disposal capacity needs. Accordingly, PXP proposes to construct a wastewater treatment (reclamation) facility to facilitate stream discharge and irrigation reuse of the produced water. The proposed treatment system consists of warm-lime softening, deep bed filtration, strong-acid cation exchange softening, cooling, two-pass reverse osmosis, and air stripping. Discharge volumes will vary with production levels, however the proposed Order authorizes up to 0.84 million gallons of reclaimed water to be discharged to Pismo Creek daily through a velocity-dissipating outfall structure. Reclaimed water holding tanks are included in the facility to buffer discharge flow rates and maximize potential for landscape irrigation uses of the reclaimed water (thereby reducing discharge to Pismo Creek). The reclamation facility location and processes are depicted on Attachments A and B of the proposed Order.

Discharge Limitations: Federal requirements (40 CFR 435) specify effluent limitations for the oil and gas extraction point source category, and prohibit discharges from such facilities to surface waters. However, exception to this prohibition is provided for in 40 CFR 435 Subpart E, if the discharge provides substantial benefit to downstream agriculture or wildlife propagation. The discharger submitted documentation of anticipated downstream benefit associated with augmenting available agricultural irrigation water, preventing saltwater intrusion into the groundwater basin, and maintaining stream flow for wildlife propagation. Information supporting exception to the discharge prohibition is summarized on page F-10 of the Fact Sheet (Attachment F of the proposed Order) and supports exception to the discharge prohibition.

Effluent limitations based on the California Toxics Rule (CTR), State Implementation Policy and the Basin Plan are included in the proposed Order, when such constituents have reasonable potential to be present in the discharge in excess of the applicable limits. Based upon this reasonable potential analyses, the proposed Order includes effluent limits for benzene and phenol. Based upon Basin Plan criteria, effluent limits are included for total dissolved solids, pH, and the narrative requirement for no discharge of toxics in toxic amounts as a numeric effluent limit of .1 TUa acute toxicity. The effluent limit for oil and grease reflects the federal effluent limitation for oil and gas extraction facilities. Receiving water and groundwater limitations include applicable water quality objectives specified in the Basin Plan.

Monitoring and Reporting Program: The proposed Order includes a monitoring and reporting program to evaluate compliance with requirements. The monitoring program

specifies effluent and receiving water monitoring for those constituents with specified limitations as well as constituents with too little available information to determine the presence or absence of reasonable potential to exceed limitations. Monitoring for these additional constituents will provide information need to perform future reasonable potential analyses with increased accuracy and level of confidence. Accordingly, the proposed Monitoring and Reporting Program includes screening for CTR pollutants, Title 22 pollutants, and Basin Plan pollutants in order to determine reasonable potential from actual facility performance data. Specific monitoring requirements are described in greater detail in the Monitoring and Reporting Program (Attachment E) and the Fact Sheet (Attachment F).

Water Recycling: The Discharger's treated wastewater is proposed to be used for onsite and offsite irrigation. Recycled water use for landscape or vineyard irrigation is considered beneficial since it would reduce the demand on local groundwater resources and reduce discharges to Pismo Creek. However, only a relatively small portion of the discharge is anticipated to be used for onsite irrigation and no formal agreements have been developed for offsite irrigation reuse.

ENVIRONMENTAL SUMMARY

A Subsequent Environmental Impact Report (SEIR) for the project is scheduled to be adopted by San Luis Obispo County on May 8, 2008, in accordance with the California Environmental Quality Act (CEQA)(Public Resources Code, Section 21100, et. seq.) The SEIR identifies potentially significant impacts to water quality and proposes mitigation measures for each potential impact. Potential water quality impacts will be avoided or mitigated through implementation of this Order. Due to the scheduled SEIR adoption date (one day before proposed permit adoption date) significant changes to the SEIR or water quality related mitigation measures will be addressed in a supplemental staff report or during the staff presentation of this item.

RECOMMENDATION

Adopt Waste Discharge Requirements Order No. R3-2008-0004, as proposed.

ATTACHMENT

1. Proposed Order No. R3-2008-0004 with Attachments
 - A. Definitions
 - B. Map of Facility Location
 - C. Treatment Facility Flow Schematic
 - D. Standard Provisions
 - E. Monitoring & Reporting Program
 - F. Fact Sheet