

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**INFORMATION SHEET
ON
TENTATIVE ORDER NO. R9-2009-0110**

WASTE DISCHARGE AND WATER RECLAMATION REQUIREMENTS

FOR

**ORANGE GROVE ENERGY, LP C/O J-POWER USA DEVELOPMENT CO., LTD.
ORANGE GROVE POWER PLANT
SAN DIEGO COUNTY**

I. Background

Orange Grove Energy, LP (Discharger) will own and operate the Orange Grove Power Plant (Power Plant). The Power Plant consists of a 96 megawatt net simple cycle electrical generation facility, located in northern San Diego County along State Route 76 near Pala. (Sega, 2009) Fresh and recycled water will be trucked onsite for power plant operation, irrigation, and toilet flushing. The Fallbrook Public Utilities District (FPUD) will supply approximately 62 acre feet of fresh water and 38.7 acre feet of recycled water to the Power Plant every year. In the event that fresh water is unavailable, the entire Power Plant is designed to operate on recycled water.

Tentative Order No. R9-2009-0110 prescribes water reclamation requirements for the use and discharge of disinfected tertiary recycled water and waste discharge requirements for the storage and disposal of wastewater. Discharge locations are identified in the following table:

Table 1. Discharge Locations

Discharge Point	Effluent Description	Hydrologic Area of Discharge
001 (Landscape Irrigation)	Tertiary recycled water	Pala Hydrologic Subarea (903.21)
002 (Septic Tank)	Domestic Wastewater	Pala Hydrologic Subarea (903.21)
003 (Above Ground Oily Drain Tanks)	Contaminated liquids and facility wash down water	Trucked offsite

II. Basis for Discharge Specifications

The FPUD did not assume responsibility for the discharge of recycled water to the Pala Hydrologic Subarea; therefore, the tentative Order establishes numeric

discharge specifications for the discharge of recycled water to discharge point 001 for landscape irrigation. Discharge Specifications are based off groundwater water quality objectives for the Pala Hydrologic Subarea (tentative Order Finding 17) and actual recycled water quality data (tentative Order Finding 11).

The concentration of nitrate-nitrogen in tertiary recycled water supplied to the Power Plant exceeds the groundwater water quality objective for the Pala Hydrologic Subarea. Consequently, recycled water is required to be applied at agronomic rates in accordance with a site specific Irrigation Management Plan.

Discharge Specifications B.3 – B.5 are established to ensure all wastewater produced onsite is properly stored and disposed.

III. Basis for Facility Design and Operation Specifications

In order to ensure efficient use of recycled water for irrigation, the Discharger must develop an Irrigation Management Plan. Requirement of an Irrigation Management Plan is consistent with State Board Water Quality Order No. 2009-0006-DWQ, *General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water (General Permit)* which was adopted on July 7, 2009. The Irrigation Management Plan will ensure the application of recycled water in amounts and at rates as needed for the landscape (i.e., at agronomic rates and not when the soil is saturated). Implementation of the Irrigation Management Plan will allow the Discharger to make appropriate use of fertilizers in order to minimize leaching of nutrients to groundwater.

All recycled water use must be overseen by a recycled water supervisor to ensure that the recycled water system is in compliance with the tentative Order and any requirements imposed by the California Department of Public Health (CDPH). The Discharger cannot receive recycled water until the CDPH has accepted the required Title 22 engineering report as complete.

IV. Basis for Recycled Water Use Requirements

Disinfected tertiary recycled water, as defined in section 60301.230 of the California Code of Regulations (CCR), Title 22, is the only classification of recycled water acceptable for use in the Power Plant. The recycled water must be managed and used in a manner consistent with sections 60304(a), 60306, and 60307(a) of CCR, Title 22 for landscape irrigation, cooling, and toilet flushing, respectively.

In addition, in accordance with Title 22 of the CCR, the CDPH reviews engineering reports for the production, distribution, and use of recycled water. The Regional Board relies on the expertise of the CDPH for recommendations needed to protect human health for inclusion in Waste Discharge Requirements. The Discharger submitted an engineering report to the CDPH on April 8, 2009 for

the production, distribution, and use of FPUD's disinfected tertiary recycled water at the Power Plant. The engineering report, however, revealed that the FPUD had not updated its Title 22 engineer report for the production of disinfected tertiary recycled water at its Wastewater Treatment Plant No. 1.

The issuance of the CDPH's comments and recommendations on the Discharger's Title 22 engineering report has been delayed until the FPUD updates its Title 22 engineering report. The tentative Order is being prepared for the December Regional Board Meeting prior to incorporating the CDPH's recommendations into the tentative Order because the Discharger requested the ability to use recycled water prior to the next Regional Board meeting in February. In order to enforce CDPH's recommendations, Recycled Water Use Requirement D.2 requires the Discharger to comply with all recommendations submitted as part of the CDPH's letter accepting the engineering report for the Power Plant. The tentative Order is written so that the Discharger will be able to receive recycled water at the Power Plant upon completion of any activities necessary to comply with CDPH's recommendations.

Recycled Water Use Requirements D.3 – D.10 are based off rules and regulations for the use of recycled water previously adopted by the Regional Board.

V. Basis for Monitoring and Reporting Requirements

Monitoring and Reporting Program No. R9-2009-0110 establishes recycled water monitoring and reporting requirements pursuant to section 13267 of the California Water Code to verify compliance with discharge specifications, facility design and operation specifications, and recycled water use requirements. The cost to implement the Monitoring and Reporting Program is reasonable in relationship to the need for the reports and the benefits to be obtained from the reports.

References:

1. Sega. April 8, 2009. *Engineering Report for the Production, Distribution, and Use of Recycled Water.*
2. State Board. 2009. *General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water (General Permit).*
3. "Uses of Recycled Water." Title 22 California Code of Regulations (2 December 2000) division 4, chapter 3, article 3.