

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
COLORADO RIVER BASIN REGION

FACT SHEET  
APPLICATION FOR  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT  
AND  
WASTE DISCHARGE REQUIREMENTS  
TO DISCHARGE TO STATE WATERS

Public Notice No.:7-00-14  
Application NPDES No. CA0104965  
Board Order No.:00-072

Heber Geothermal Co. Power Plant  
895 Pitzer Road  
Heber, CA 92249

On the basis of preliminary staff review and application of lawful standards and regulations, the Regional Board proposed to renew waste discharge requirements for the discharge. The tentative proposed determinations are described below.

I. Description of Proposed Discharge:

The discharger uses naturally occurring underground steam to run turbines, which produce electricity and utilize Imperial Irrigation canal water in its cooling operations. Incoming water is treated with chemicals to prevent fouling, corrosion and growth of algae. The discharger proposes to discharge a maximum of 4.28 million-gallons-per-day (MGD) of cooling tower blowdown water.

The power plant is located in Imperial County, South of Heber. The discharge would be to the Strout Drain in the S 1/2 of Section 34, T16S, R14E, SBB&M. The wastewater would flow from Strout Drain into the Alamo River and then to the Salton Sea.

II. Rationale for Effluent and Receiving Water Limitations

A. Receiving Waters

Strout Drain  
Alamo River  
Salton Sea

B. Beneficial Uses of Water in the Strout Drain are:

The beneficial uses of waters in the Imperial Valley Drains are:

- a. Fresh Water Replenishment for Salton Sea (FRSH)
- b. Water Contact Recreation (REC I)
- c. Non-Contact Water Recreation (REC II)
- d. Warm Water Habitat (WARM)
- e. Wildlife Habitat (WILD)
- f. Preservation of Rare, Endangered or Threatened Species (RARE)

Beneficial Uses of Water in the Alamo River are:

The beneficial uses of waters in the Alamo River are:

- a. Fresh Water Replenishment for Salton Sea (FRSH)
- b. Water Contact Recreation (REC I)
- c. Non-Contact Water Recreation (REC II)
- d. Warm Water Habitat (WARM)
- e. Wildlife Habitat (WILD)
- f. Preservation of Rare, Endangered or Threatened Species (RARE)

Beneficial Uses of Water in the Salton Sea are:

The beneficial uses of waters in the Salton Sea are:

- a. Aquaculture (AQ)
- b. Water Contact Recreation (REC I)
- c. Non-Contact Water Recreation (REC II)
- d. Warm Water Habitat (WARM)
- e. Wildlife Habitat (WILD)
- f. Preservation of Rare, Endangered or Threatened Species (RARE)

III. Proposed Effluent Limitations:

Wastewater discharged to Strout Drain shall not contain constituents in excess of the following limits:

<u>Constituents</u>	<u>Unit</u>	<u>30-Day Arithmetic Mean Discharge Concentration</u> <sup>1</sup>	<u>Criterion Maximum Concentration</u>	<u>Continuous Concentration (4-Day Average)</u>
Total Dissolved Solids (TDS)	mg/L <sup>2</sup>	4000	4500	-----
Settleable Solids	ml/L <sup>3</sup>	0.3	1.0	-----
Residual Chlorine	mg/L	0.01	0.02	-----
Zinc	µg/L	-----	120	120
Flow	MGD	4.3	4.0	-----

The effluent values of hydrogen ion (pH) shall remain within the limits of 6.0 to 9.0.

There shall be no discharge in detectable amounts of any of EPA's designated 126 priority pollutants [40CFR Part 423.15 (j)(1)], except as set forth for Zinc in Proposed Effluent Limitation III. e. (above).

There shall be no acute toxicity in the effluent being discharged to Strout Drain. Acute Toxicity is defined as less than ninety percent survival, fifty percent of the time, and less than seventy percent survival, ten percent of the time, of standard test organisms in undiluted effluent in a 96-hour static or continuous-flow test.

The applicable requirements of the California Toxic Rule and the State's Policy for implementation of toxic standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California are part of the basis for the effluent limitation in this Order.

#### IV. Basis of Effluent Limitations

Effluent discharged from this facility could contain pollutants in sufficient quantities to affect receiving water quality. Pursuant to Section 13263, Article 4, Chapter 4 of the Porter Cologne Water Quality Control Act, the Regional Boards are required to issue Waste Discharge Requirements for discharges that could affect the quality of the State's waters. Furthermore, Federal Regulation 40 CFR 122.1 requires the issuance of NPDES permits for pollutants discharged from a point source to the waters of the United States. The draft discharge requirements contain specific discharge limitations for selected pollutants. The rationales for each of the limitations is as follows:

<sup>1</sup> 30 Day Mean-The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days as specified in the Monitoring and Reporting Program.

<sup>2</sup> Milligrams per Liter

<sup>3</sup> Milliliters per Liter

Constituents

Basis for Limitations

Total Suspended Solids (TSS)

High levels of suspended solids can adversely impact aquatic habitat. Untreated or improperly treated wastewater can contain high amounts of suspended solids.

Total Dissolved Solids (TDS)

Increasing levels of dissolved solids are adversely impacting the Salton Sea. Wastewater effluent can contain high amounts of dissolved solids.

Settleable Matter

High levels of settleable matter can have an adverse effect on aquatic habitat. Untreated or improperly treated wastewater can contain high amounts of settleable matter.

Hydrogen Ion (pH)

pH is a measure of Hydrogen Ion concentration in the water. A range specified between 6 to 9 ensures suitability of biological life. This limitation has been adopted in the Basin Plan of the Region.

Chlorine

High levels of chlorine can have an adverse affect on aquatic life. Chlorine is one of the chemicals used in treating the cooling tower water.

Zinc

High levels of Zinc has an adverse affect on aquatic organisms and their uses (i.e. consumption by humans and wildlife) in the receiving water. One of the chemicals used in treating the cooling tower water contains Zinc.

Toxicity

Toxicity testing ensures that the effluent does not contain metals, chemicals, pesticides or other constituents in concentrations toxic to aquatic life.

V. Basis of Receiving Water Limitations:

Receiving water limitations have been established for the protection of aquatic life.

VI Monitoring Requirements

Monitoring for those pollutants expected to be present in the Outfall OO1 will be required as shown on the proposed monitoring and reporting program and as required in item no. 6 below.

VII Information Sources

- (1) EPA NPDES Application Forms submitted by the discharger.
- (2) 40CFR parts 117, 122, 123, 124, 136, 302, 403, and 503
- (3) Water Quality Control Plan (Colorado River Basin - Region 7) dated 1994
- (4) Regional Board files related to Heber Geothermal Co. Power Plant
- (5) Porter-Cologne Water Quality Control Act with additions and amendments effective January 1, 2000
- (6) Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California adopted March 2, 2000
- (7) California Toxics Rule, (CTR) published by May 18, 2000 by U.S. EPA
- (8) National Toxics Rule (NTR) adopted by U.S. EPA on February 5, 1993

Written Comments

Interested parties are invited to submit written comments on these draft waste discharge requirements. Comments should be submitted in writing by June 19, 2000 to:

Executive Officer  
California Regional Water Quality Control Board  
Colorado River Basin Region  
73-720 Fred Waring Drive, Suite 100  
Palm Desert, CA 92250

The application number should appear on the first page of any submitted comments. All comments received by the above date will be considered in the formulation of the final determinations.

Public Hearing

The waste discharge requirements will be considered by the Regional Board at a public hearing to be held at the City Council Chambers, City of La Quinta, 78-495 Calle Tampico, La Quinta on June 28, 2000.

### Register of Interested Persons

Any person interested in a particular application or group of applications may leave his/her name, address and phone number as part of the file for the application. This list of names will be maintained as a means for persons with an interest in an application to contact others with similar interests.

### Information and Copying

Copies of the application, proposed waste discharge requirements and other documents (other than those that the Regional Board's Executive Officer maintains as confidential) are available at the Regional Board office for inspection and copying.

For additional information, interested persons may write to the above address, or call Jay Mirpour, Sanitary Engineering Associate, at (760) 776-8966.