

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
COLORADO RIVER BASIN REGION**

MONITORING AND REPORTING PROGRAM NO. 00-072  
FOR  
UNITED STATES TRUST COMPANY OF NEW YORK, LAND/FACILITY OWNER  
OGDEN GEOTHERMAL OPERATIONS, INC., OPERATOR  
HEBER GEOTHERMAL COMPANY POWER PLANT  
South of Heber – Imperial County

Location of Discharge: Strout Drain in the S 1/2 of Section 34, T16S, R14E, SBB&M

MONITORING

1. The collection, preservation and holding times of all samples shall be in accordance with U. S. Environmental Protection Agency approved procedures. All analyses shall be conducted by a laboratory certified by the State Department of Health Services to perform the required analyses.
2. Compliance with the discharge limitations shall be determined at the end of the discharge pipe.
3. If the facility is not in operation, or there is no discharge during a required reporting period, the discharger shall forward a letter to the Regional Board indicating that there has been no activity during the required reporting period.
4. A sampling station shall be established where representative samples of the effluent can be obtained. All samples shall be taken at the end of the outfall. Effluent monitoring is required when any day operation occurs, including short cycle operations and regular maintenance where discharge occurs. The discharger shall provide the location of the sampling station in all monitoring reports.

EFFLUENT MONITORING

Wastewater discharged into Strout Drain shall be monitored for the following constituents:

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Chlorine	mg/L	Grab	Daily <sup>1</sup>
Hydrogen Ion (pH)	pH Units	Grab	Daily
Temperature	°C	Grab	Daily
Flow	MGD <sup>2</sup>	Measurement	Daily
Total Suspended Solids	mg/L	Grab	Weekly
Total Dissolved Solids	mg/L	Grab	Weekly

<sup>1</sup> Daily – Reported monthly with arithmetic mean of daily flow calculated for the whole month.

<sup>2</sup> MGD – Million Gallons per Day

<u>Constituent</u>	<u>Unit</u>	<u>Sample</u>	<u>Type of Sampling Frequency</u>
Zinc	Φg/L <sup>3</sup>	Grab	Daily
Ammonia	mg/L	Grab	Weekly
Settleable Matter	ml/L <sup>4</sup>	Grab	Weekly
VOCs <sup>5</sup>	Φg/L	Grab	Annually

### RECEIVING WATER MONITORING

- Water in the Strout Drain shall be monitored for the following constituents. All samples shall be taken between 6 a.m. and 6 p.m. The sampling station shall be maintained where representative samples of mixed water can be obtained. Said sampling station shall be located midstream in Strout Drain at a point where the discharge and receiving waters have thoroughly mixed, but not to exceed 50 feet downstream from the point of discharge.

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Hydrogen Ion	----	Grab	Weekly
Dissolved Oxygen	mg/L	Grab	Weekly
Temperature	°C	Grab	Weekly

- Water in the Strout Drain shall be monitored for temperature at approved sampling stations. Sampling shall be conducted weekly at stations above and below the Strout Drain discharge point.
- In conducting the receiving water sampling, attention shall be given to the presence or absence of:
  - Floating or suspended matter
  - Discoloration
  - Aquatic Life
  - Visible film, sheen or coating
  - Fungi, slime or objectionable growths
  - Potential nuisance conditions

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<sup>3</sup> Φg/L - micrograms per Liter

<sup>4</sup> ml/L – milliliters-per-Liter

<sup>5</sup> VOC – Volatile Organic Compounds

### 2,3,7,8- TETRACHLORODIBENZO-P-DIOXIN (TCDD) EQUIVALENT MONITORING

By May 18, 2001, the discharger shall begin monitoring its effluent for the presence of 17 (Toxic equivalency factors for 2,3,7,8-tetrachlorodibenzo-p-dioxin equivalents) congeners once during the dry weather and once during the wet weather each year for a period of three consecutive years. The congeners and Toxic Equivalent Factors can be found in Table 4 of the *"Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California."* A copy of Table No. 4 is shown below:

Congener	Toxic Equivalent Factors (TEF)
2,3,7,8- Tetra-Chlorinated dibenzodioxins (CDD)	1
1,2,3,7,8- Penta-CDD	1.0
1,2,3,4,7,8- Hexa-CDD	0.1
1,2,3,6,7,8- Hexa-CDD	0.1
1,2,3,7,8,9- Hexa-CDD	0.1
1,2,3,4,6,7,8- Hepta-CDD	0.01
OctaCDD	0.0001
2,3,7,8- Tetra- Chlorinated dibenzofurans (CDF)	0.1
1,2,3,7,8- Penta-CDF	0.05
2,3,4,7,8- Penta-CDF	0.5
1,2,3,4,7,8- Hexa-CDF	0.1
1,2,3,6,7,8- Hexa-CDF	0.1
1,2,3,7,8,9- Hexa-CDF	0.1
2,3,4,6,7,8- Hexa-CDF	0.1
1,2,3,4,6,7,8- Hepta-CDF	0.01
1,2,3,4,7,8,9- Hepta-CDF	0.01
Octa-CDF	0.0001

The discharger shall report for each congener the analytical results of the effluent monitoring, including the quantifiable limit and the Method Detection Limit<sup>6</sup>, and the measured or estimated concentration. In addition, the discharger shall multiply each measured or estimated congener concentration by its respective Toxic Equivalent Factors<sup>7</sup> value and report the sum of these values. This information shall be submitted as part of the discharger's monitoring reports.

<sup>6</sup> As determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999)

<sup>7</sup> Table 4 Toxic Equivalency Factors (TEFs) for 2, 3, 7, 8- TCDD Equivalents, pg. 27, Policy for Implementation of Toxics, Standard for Inland Surface Waters, Enclosed Bays and Estuaries of California, Adopted March 2, 2000

## EFFLUENT CHRONIC TOXICITY TESTING

The discharger shall conduct chronic toxicity testing on the effluent as follow:

<u>Constituent Unit</u>	<u>Sample</u>	<u>Type of of Test</u>	<u>Minimum Frequency</u>
Chronic Toxicity	tu <sub>c</sub>	Composite	Monthly
Acute Toxicity	% Survival	Composite	Monthly

Both test species given below shall be used to measure chronic toxicity:

<u>Species</u>	<u>Test Duration Effect</u>	<u>(Days)</u>	<u>Reference</u>
Fathead Minnow (Pimephales Promelas)	Larval Survival	7	EPA/600/4-91/002 (Chronic) EPA/600/4-90/027F (Acute)
Water Flea (Ceriodaphnia dubia)	Survival; Number of Young	7	EPA/600/4-91/002 (Chronic) EPA/600/4-90/027F (Acute)

Toxicity Test Reference: Methods for measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition, EPA/600-4-90-027F, August, 1993. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water for Freshwater Organisms, EPA/600/4-91/002, July, 1994.

Dilution and control waters may be obtained from an unaffected area of receiving waters. Standard dilution is an option and may be used if the above source is suspected to have toxicity greater than 1.0 tu<sub>c</sub>. The sensitivity of the test organism to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results.

Chronic toxicity may be expressed and reported as toxic units (tu<sub>c</sub>) where:

$$tu_c = 100/NOEC$$

and the No Observed Effect Concentration (NOEC) is expressed as the maximum percent effluent of test water that causes no observed effect on a test organism, as determined in a critical life stage toxicity test indicated above.

Acute toxicity may be calculated from the results of the chronic toxicity test described above and shall be reported along with the results of each chronic test. Acute toxicity shall be expressed as percent survival of test organism over a ninety-six hour period in 100 % effluent.

## REPORTING

1. The discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with waste discharge requirements.
2. The discharger shall report with each sample result the applicable Minimum Level (as described in the California Toxics Policy) and the laboratory current Method Detection Limit, as determined by the procedure in 40 CFR 136 (revised as of May 14, 1999).
3. Records of monitoring information shall include:
  - a. The date, exact place, and time of sampling or measurements.
  - b. The individual(s) who performed the sampling or measurements.
  - c. The date(s) analyses were performed.
  - d. The individual(s) who performed the analyses.
  - e. The results of such analyses.
4. Monitoring reports shall be certified under penalty of perjury to be true and correct, and shall contain the required information at the frequency designated in this monitoring report.
5. Each report shall contain the following statement:

“I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.”
6. A duly authorized representative of the discharger may sign the documents if:
  - a. The authorization is made in writing by the person described above;
  - b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and
  - c. The written authorization is submitted to the Regional Board's Executive Officer.
7. The discharger shall report any instances of noncompliance with the requirements of this Board Order in the monthly monitoring report.
8. Daily, weekly, semi-weekly, and monthly monitoring reports shall be submitted by the 15<sup>th</sup> day of the following month. Quarterly monitoring reports shall be submitted to the Regional Board by January 15, April 15, July 15, and October 15 of each year. Annual reports shall be submitted by January 15 of each year.
9. Reports shall be submitted to:

California Regional Water Quality Control Board  
Colorado River Basin Region  
73-720 Fred Waring Drive, Suite 100  
Palm Desert, CA 92260
10. A copy of the Monitoring Report shall also be sent to:

Regional Administrator  
U. S. Environmental Protection Agency  
Region 9, Attn: 65/MR, W-3  
75 Hawthorne Street  
San Francisco, CA 94105

Ordered By: \_\_\_\_\_  
Executive Officer

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June 28, 2000  
Date