

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

MONITORING AND REPORTING PROGRAM NO. 00-001
FOR
SECOND IMPERIAL GEOTHERMAL COMPANY (SIGC), OWNER
OGDEN SIGC GEOTHERMAL OPERATIONS, INC., OPERATOR
DISCHARGE OF COOLING TOWER WASTEWATER
South of Heber – Imperial County

Location of Discharge: Beech Drain in the NE ¼ of Section 4, T17S, 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 Beech 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 ¹
Hydrogen Ion (pH)	pH Units	Grab	Daily
Temperature	°F	Grab	Daily
Flow	MGD ²	Measurement	Daily
Total Suspended Solids	mg/L	Grab	Weekly
Total Dissolved Solids	mg/L	Grab	Weekly
<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Total Phosphate	mg/L	Grab	Weekly

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

² MGD – Million Gallons-per-Day

Ammonia	mg/L	Grab	Weekly
Settleable Matter	ml/L ³	Grab	Weekly
VOCs	μg/L	Grab	Annually

RECEIVING WATER MONITORING

All receiving water samples shall be grab samples. Sampling stations shall be as follows;

<u>Station</u>	<u>Description</u>
R-1	Not to exceed 100 feet upstream from the point of discharge to Beech Drain. A greater distance may be acceptable provided the discharger submits proper justification that the prescribed distance is inaccessible.
R-2	Not to exceed 100 feet downstream from the point of discharge to Beech Drain. A greater distance may be acceptable provided the discharger submits proper justification that the prescribed distance is inaccessible.

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Station</u>	<u>Sampling Frequency</u>
pH	pH Units	Grab	R-1, R-2	Monthly
Temperature	°F	Grab	R-1, R-2	Monthly
Hardness	mg/L	Grab	R-1, R-2	Monthly

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions at Stations R-1 and R-2. Attention shall be given to the presence or absence of:

- a. Floating or suspended matter
- b. Discoloration
- c. Aquatic Life
- d. Visible film, sheen or coating
- e. Fungi, slime, or objectionable growths
- f. Potential nuisance conditions

³ M/L – milliliters-per-Liter

EFFLUENT CHRONIC TOXICITY TESTING

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

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Test</u>
Chronic Toxicity	tu _c	Composite	Quarterly
Acute Toxicity	% Survival	Composite	Quarterly

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

<u>Species</u>	<u>Effect</u>	<u>Test (days)</u>	<u>Duration Reference</u>
Fathead Minnow (Pimephales Promelas)	Larval Survival and Growth Rate	7	Horning & Weber 1989
Water Flea (Ceriodaphnia dubia)	Survival; Number of Young	7	Horning & Weber 1989

Toxicity Test Reference: Horning W. B. and C. I. Weber (eds). 1989. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organism. Second Edition. U. S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Cincinnati, Ohio. EPA/600/4-89/001.

Dilution and control waters should be obtained from an unaffected area of the receiving waters. Standard dilution water should be used if the above source exhibit toxicity greater than 1.0 tu_c. 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 shall be expressed and reported as toxic units (tu_c) where:

$$tu_c = 100/NOEL$$

and the No Observed Effect Level (NOEL) 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 shall 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 organisms over a ninety-six hour period.

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. 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.
3. 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.
4. 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."
5. 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.
6. The discharger shall report any instances of non-compliance with the requirements of this Board Order in the monthly monitoring report.
7. Daily, weekly, semi-weekly, and monthly monitoring reports shall be submitted by the 15th 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.
8. 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

9. 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: original signed by/
Executive Officer

Date _____ April 12, 2000