CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 80-7

WASTE DISCHARGE REQUIREMENTS
FOR
CHEVRON U.S.A. INC.
HEBER GEOTHERMAL PROJECT-POWER PLANT NO. 1
NEW RIVER WATER TREATMENT AND INJECTION FACILITIES
South of Heber - Imperial County

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. Chevron U.S.A. Inc (hereinafter also referred to as the discharger), c/o Chevron Resources Co., P.O. Box 3722, San Francisco, CA 94119, submitted a Report of Waste Discharge dated November 1, 1979.

2. The discharger proposes to construct and operate a water treatment and injection facility which would treat New River water and inject it through 2 wells into the geothermal reservoir. Water treatment plant and injection wells would be located in the SE¼, Section 5, T17S, R14E, SBB&M. The following wastes would be produced during construction and operation.

   a. Organic and inorganic material in New River water would be chemically treated with alum and polyelectrolytes, removed by sedimentation, aerobically digested, dewatered and dried for ultimate disposal as landfill, adjacent to the plant site. The volume of sludge to be disposed is estimated at 1.5 to 3 tons per day.

   b. Approximately 21,000 gallons of waste drilling mud and cuttings from each injection well would be discharged to mud sumps.

   c. Well cleanout fluid in the amount of about 500 barrels per well would be flowed to portable steel tanks and either injected back into the reservoir or transported to an approved solid waste disposal site.

3. The drilling mud components which may be used are:

Bentonite clay	Bicarbonate of soda
Sepiolite	Drilling detergent (diethenolamide)
Lignite	Soda ash
Caustic (sodium hydroxide)	Cotton seed hulls
Cypan (sodium polyacrylate)	Wood fiber

Rescinded by 86-51 7/9/86

4. New River water at the international border has a total dissolved solids concentration which ranges from about 3820 mg/l to 5480 mg/l. This is in the range of agricultural drainage water and, also, shallow groundwater in the Heber area. Also, this TDS is below that of the deep geothermal water.

5. The discharger is hereby informed that there are no solid waste disposal sites in the Colorado River Basin Region at this time that have been approved by the Regional Board to receive geothermal salt and brine wastes.

6. The Water Quality Control Plan for the West Colorado River Basin Region was adopted on April 10, 1975. The Basin Plan contains water quality objectives for Imperial Hydrologic Subunit.

7. Beneficial uses to be protected by this Order are as follows:

   a. Groundwater

      1. Shallow groundwaters in two known wells located in the Heber area at a depth of 145 to 150 feet, have a total dissolved solids content of 9410 mg/l and 5,410 mg/l, and are not beneficially used.

      2. Agricultural subsurface drainage water which enters tile drains and open drains in the Heber area, has a total dissolved solids content of from 2,400 mg/l to 12,200 mg/l, and eventually serves as a source of replenishment for Salton Sea.

      3. Deep groundwaters have a total dissolved solids content of 12,000 to 20,000 mg/l and are being investigated for geothermal development.

8. Imperial County Planning Department adopted on December 12, 1979, Environmental Impact Report No. 213-79 for this project. This report indicates that this project would not have a significant effect on water quality.

9. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the proposed discharge.

10. The Board in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, Chevron U.S.A., Inc., shall comply with the following:

A. Discharge Specifications

1. Neither the treatment nor the discharge of wastes shall create a pollution or a nuisance as defined in Division 7 of the California Water Code.

2. Geothermal fluids and other wastes shall not enter any canals, drainage channels, or drains (including subsurface drainage systems) which could provide flow to Salton Sea.

3. Temporary discharge and/or temporary storage of drilling mud, drill cuttings, and cleanout and flow test fluid, other than in mud sumps or other containers having a coefficient of permeability of lining in excess of 1×10^{-6} cm/sec, is prohibited, and the fluids contained therein shall not penetrate through the lining during the containment period.

4. Long term storage and/or flow of geothermal materials for longer than one (1) year, other than in containers having a coefficient of permeability of lining in excess of 1×10^{-8} cm/sec, is prohibited, and the fluids contained therein shall not penetrate through the lining during the containment period.

5. Materials discharged to and/or stored in containers shall not overflow said containers.

6. Adequate protective works and maintenance shall be provided to assure that each container of drilling mud and/or geothermal materials shall not become eroded or otherwise damaged by floods occurring during the project life of said containers.

7. Drilling muds with extractable water containing a total dissolved solids concentration exceeding 6,000 mg/l, and also, brine and salt wastes, shall be discharged at a Class I or Class II-1 disposal site approved by the Regional Board to receive said wastes.

8. Drilling mud with extractable water containing a total dissolved solids concentration which is less than 6,000 mg/l, and not containing hazardous wastes, may be disposed of at a Class II-2 disposal site approved by the Regional Board to receive such waste.

9. Final disposal of residual wastes in accordance with specifications No. 7 and 8 above, shall be accomplished upon abandonment of operations. Lack of construction or operational activity on the site for a period of one year shall constitute abandonment for the purposes of this Order.

B. Provisions

1. The discharger shall comply with "Monitoring and Reporting Program No. 80-7 " and "General Provisions for Monitoring and Reporting," and future revisions thereto, as specified by the Executive Officer.

2. Prior to the discharge of any drilling mud or geothermal materials into a mud sump or other container, the discharger shall submit to the Regional Board a technical report on the construction of said container, and a certificate signed by a California Registered Civil Engineer stating that the container and attendant facilities are constructed to meet the requirements of this Order.

IT IS FURTHER ORDERED, that in accordance with Finding No. 4, (above), and pursuant to Water Code Section 13269 issuance of waste discharge requirements to regulate subsurface injection and/or surface impoundment(s) for processing and injecting New River Water is waived. This waiver is conditional and may be terminated at any time.

I, Arthur Swajian, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on January 23, 1980.

Arthur Swajian
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 80-7
FOR
CHEVRON U.S.A. INC.
HEBER GEOTHERMAL PROJECT-POWER PLANT NO. 1
NEW RIVER WATER TREATMENT AND INJECTION FACILITIES
South of Heber - Imperial County

MONITORING

Chevron U.S.A. Inc. shall report monitoring data to the Regional Board in accordance with the following schedule:

REGULAR REPORTING ITEMS

Reporting Item	Units	Reporting Frequency
1. Volume and type of geothermal waste contained in each container.	Gallons	Monthly
2. Volume of saline drilling mud and salt and brine waste hauled to a Class I or Class II-1 solid waste disposal site, and name of site.	Gallons	Monthly
3. Volume and Total Dissolved Solids concentration of non-saline drilling mud hauled to a Class II-2 solid waste disposal site, and name of site.	Gallons and mg/l	Monthly
4. Volume and location of disposal of water treatment sludges.	Cubic yards	Monthly

OTHER REPORTING ITEMS

5. At least 20 days prior to the discharge of any drilling mud or geothermal materials into a mud sump or other container, the discharger shall submit to the Regional Board a technical report on the construction of said container, and a certificate signed by a California Registered Civil Engineer stating that the container and attendant facilities are constructed to meet the requirements contained in Board Order No. 80-7.

6. At least 10 days prior to initial discharge of any geothermal fluids from a well, the discharger shall report said initial discharge to the Board.

7. Chevron U.S.A. Inc., shall immediately report any accidental spillage or release of waste material, and also, the immediate measures being taken to correct same and to limit detrimental effects.

8. Report of completion of removal of all geothermal wastes from mud sumps - reported within one week following completion of work.

9. At least 10 days prior to destruction of any mud sump, the discharger shall request a Regional Board staff inspection and approval of the cleanup procedure.

REPORTING

The above monitoring program shall be implemented immediately upon commencement of discharge at each site.

Monthly reports shall be submitted to the Regional Board by the 15th day of the following month. Reports for Item 7 (above) shall be preceded by phone communication to the Regional Board's office (714) 346-7491. Copies of the reports submitted to the Board pursuant to this Monitoring and Reporting Program shall be maintained at the operations site, and shall also be made available to staff of the Regional Board upon request.

Mail reports to:

California Regional Water Quality Control Board
Colorado River Basin Region
73-271 Highway 111, Suite 21
Palm Desert, CA 92260

Ordered by Arthur Swajian

January 23, 1980
Date

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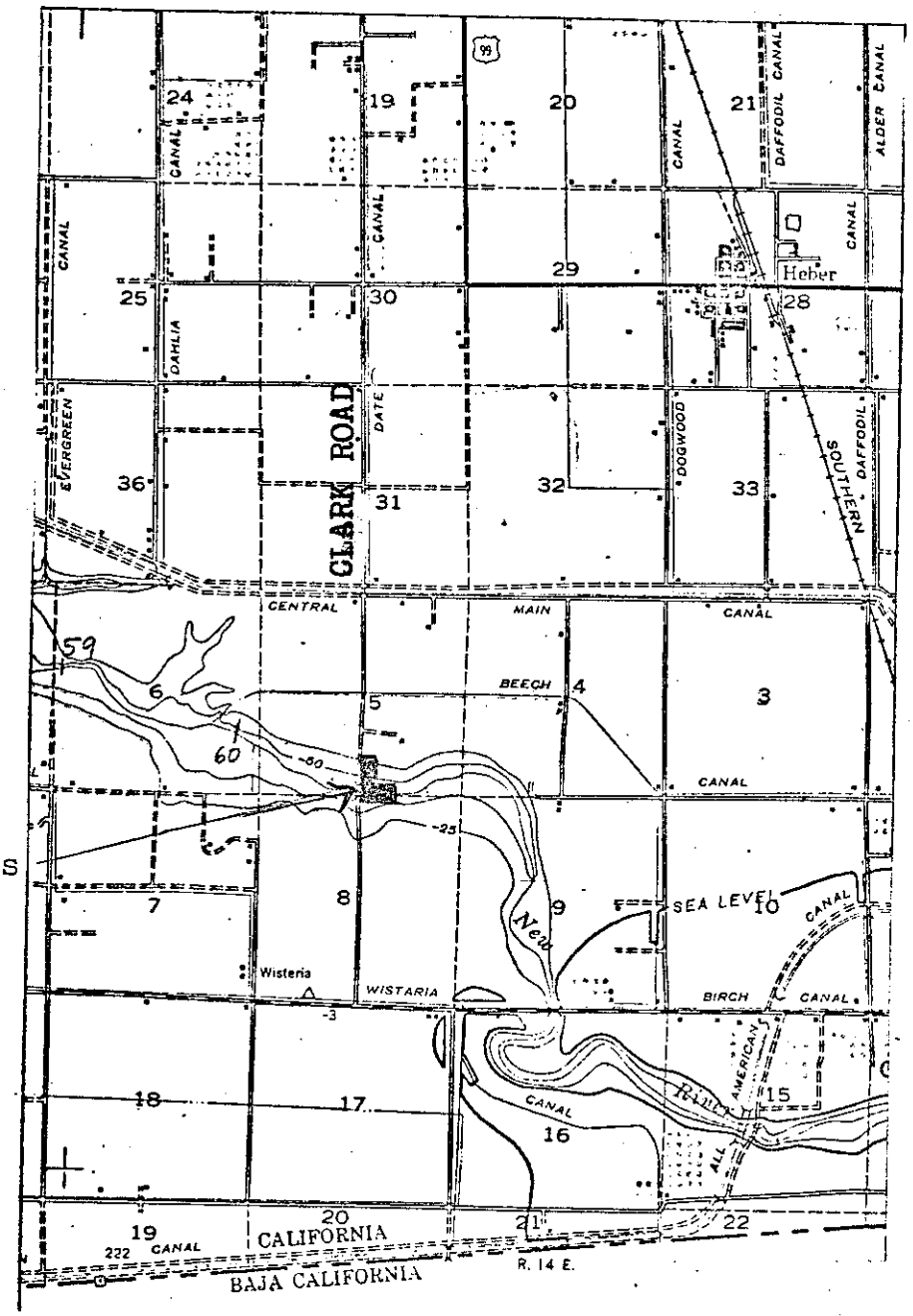

SITE MAP

CHEVRON U.S.A. INC.
HEBER GEOTHERMAL PROJECT-POWER PLANT NO.1
NEW RIVER WATER TREATMENT AND INJECTION FACILITIES
South of Heber - Imperial County
SE$\frac{1}{4}$, Section 5, T17S, R14E, SBB&M

Order No. 80-7

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

GENERAL MONITORING AND REPORTING PROVISIONS FOR LAND DISPOSAL OF WASTES

GENERAL PROVISIONS FOR SAMPLING AND ANALYSIS

Unless otherwise noted, all sampling, sample preservation, and analyses shall be conducted in accordance with the current edition of "Standard Methods for the Examination of Water and Waste Water" or approved by the Executive Officer.

All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Public Health or a laboratory approved by the Executive Officer.

All samples shall be representative of the waste discharge under the conditions of peak load.

GENERAL PROVISIONS FOR REPORTING

For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

By January 30 of each year, the discharger shall submit an annual report to the regional board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the discharger shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the waste discharge requirements.

The discharger shall file a written report within 90 days after the average dry-weather flow for any month that equals or exceeds 75% of the design capacity of the waste treatment or disposal facilities. The report shall contain a schedule for studies, design, and other steps needed to provide additional capacity or limit the flow below the design capacity prior to the time when the waste flow rate equals the capacity of the present units.