

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 77-9

WASTE DISCHARGE REQUIREMENTS
FOR
McCULLOCH OIL CORPORATION
Brawley Area - Imperial County

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

1. McCulloch Oil Corporation (hereinafter also referred to as the discharger), 10880 Wilshire Boulevard, Los Angeles, California 90017, submitted a Report of Waste Discharge dated November 5, 1976.
2. The discharger proposes to drill one geothermal exploration well in the Brawley area of Imperial County located 2040'E and 660'S from the NW corner of Section 28, T14S, R14E, SBB&M. The total operation will disturb about 2 acres of surface.
3. The discharger proposes that all drilling muds will be stored in a leak-proof storage basin situated approximately 50 feet from the well. Later, the muds will be trucked and discharged at a disposal site approved to receive these wastes. The possible drilling fluid components which may be used are:

gel
lignite
lubricating oil

caustic soda
cyan
bentonite

4. The discharger reports that the storage basin will be lined with a 6-inch compacted layer of bentonite and clay, and will be approximately 120'x60'x5' (deep).
5. The discharger proposes to discharge well cleanout fluid into the storage basin at a rate of 1450 gpm until the basin is full. The fluid would later be reinjected or discharged to an approved disposal site.

*Cancelled
5/12/88*

6. The discharger states that a reinjection well will be drilled if geothermal potential is revealed at the site. The discharger proposes that reinjection will occur at a depth below 3,000 feet, where the salinity is estimated to be about 30,000 ppm of total dissolved solids.
7. The discharger proposes to flow test the exploration well by discharging a maximum of 168,000 gallons of geothermal fluid at a maximum discharge rate of 8,400 gallons-per-operating-day into the storage basin, where it would be either reinjected or trucked to an approved disposal site.
8. The discharger has been informed by the Regional Board that there are no solid waste disposal sites in Region 7 at this time that have been approved by the Regional Board to receive geothermal salt wastes.
9. The discharger proposes that clean-up will be accomplished upon abandonment of the well. All residue removed from the storage basins will be disposed of at an approved solid waste disposal site.
10. The discharger states that a maximum of approximately 8-15 persons will be working at the well site at any one time. Portable sanitary facilities will be provided at the site.
11. The Water Quality Control Plan for the West Colorado River Basin was adopted by the Regional Board on April 10, 1975. This Order implements the objectives stated in said Plan.
12. Beneficial Uses
 - a. Groundwater
 1. Shallow groundwaters at the discharge location are saline and are not beneficially used.
 - b. Imperial Valley irrigation drains
 1. Limited public fishing activity.
 2. Transport of dissolved solids to the Salton Sea for agricultural soil salinity control.
 3. Freshwater habitat for fish and wildlife.
 4. Freshwater replenishment for the Salton Sea.
 - c. Salton Sea
 1. Water contact recreation.
 2. Non-contact recreation.
 3. Water and vegetative habitat for the maintenance of wildlife.

13. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the proposed discharge.
14. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, McCulloch Oil Corporation, shall comply with the following:

A. Discharge Specifications

1. Neither the treatment nor the discharge of wastes shall cause a pollution or a nuisance.
2. The discharge of geothermal fluids to any canals, drainage channels or drains which could provide flow to Salton Sea is prohibited.
3. Temporary surface discharge of geothermal fluids other than into a storage basin from which there is no seepage or overflow is prohibited.
4. Adequate protective works and maintenance shall be provided to assure that the storage basin will not become eroded or otherwise damaged during the project period, and/or until all geothermal materials are removed.
5. A minimum freeboard of at least two (2) feet shall be maintained in the storage basin.
6. Geothermal wastes discharged by subsurface injections shall be discharged into the zone of extraction, or zones that contain a total dissolved solids content which is equal to or greater than that contained in the zone of extraction, or to zones having a total dissolved solids content greater than 10,000 mg/l.
7. The volume discharged into the storage basin from flow testing the exploration well shall not exceed 168,000 gallons.
8. All geothermal wastes shall be removed from the storage basin with cleanup of all contents upon abandonment of the basin. Lack of construction or operational activity on the site for a period of six (6) months shall constitute abandonment for the purposes of this Order.

B. Provisions

1. The discharger shall comply with "Monitoring and Reporting Program No. 77-9" and "General Provisions for Monitoring and Reporting", and future revisions, thereto, as specified by the Executive Officer.

2. Prior to the discharge of any geothermal materials into the storage basin, the discharger shall submit to the Regional Board a certificate signed by a California Registered Civil Engineer stating that the basin and attendant facilities are constructed to meet the requirements of this Order.
3. This Order is for the discharge of only drilling muds, cleanout water and geothermal fluid resulting from flow testing the exploration well.

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 26, 1977.

Arthur Swajian
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 77-9
FOR
McCULLOCH OIL CORPORATION
Brawley Area - Imperial County

Location: NW Corner of Section 28, T14S, R14E, SBB&M.

MONITORING

McCulloch Oil Corporation shall report monitoring data to the Regional Board in accordance with the following schedule:

<u>Constituents</u>	<u>Units</u>	<u>Reporting Frequency</u>
1. Volume discharged to the storage basin	Gallons	Monthly
2. Volume injected to sub-surface strata from the storage basin	Gallons	Monthly
3. Volume contained in the storage basin	Gallons	Monthly
4. Total dissolved solids content of waste fluid in the storage basin	mg/l	Monthly
5. Total dissolved solids concentration of Ground-water contained in strata receiving waste fluid injection	mg/l	At least 10 days prior to commencement of injection
6. Location and depth of disposal well		At least 10 days prior to commencement of injection
7. Immediate reporting of any accidental spillage or release of waste material, and also, plan for immediate measures being taken to correct same and limit detrimental effects.		

8. Within 10 days after the initial discharge of geothermal fluid from a well, the discharger shall report said initial discharge to the Board.
9. Report of completion of removal of all geothermal waste from the storage basin and cleanup of the premises - reported within one week following completion of work.
10. At least ten (10) days prior to destruction of the storage basin 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 well discharge at the 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 forwarded immediately, and if at all possible shall be preceded by phone communication to the Regional Board's office. Phone No. (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.

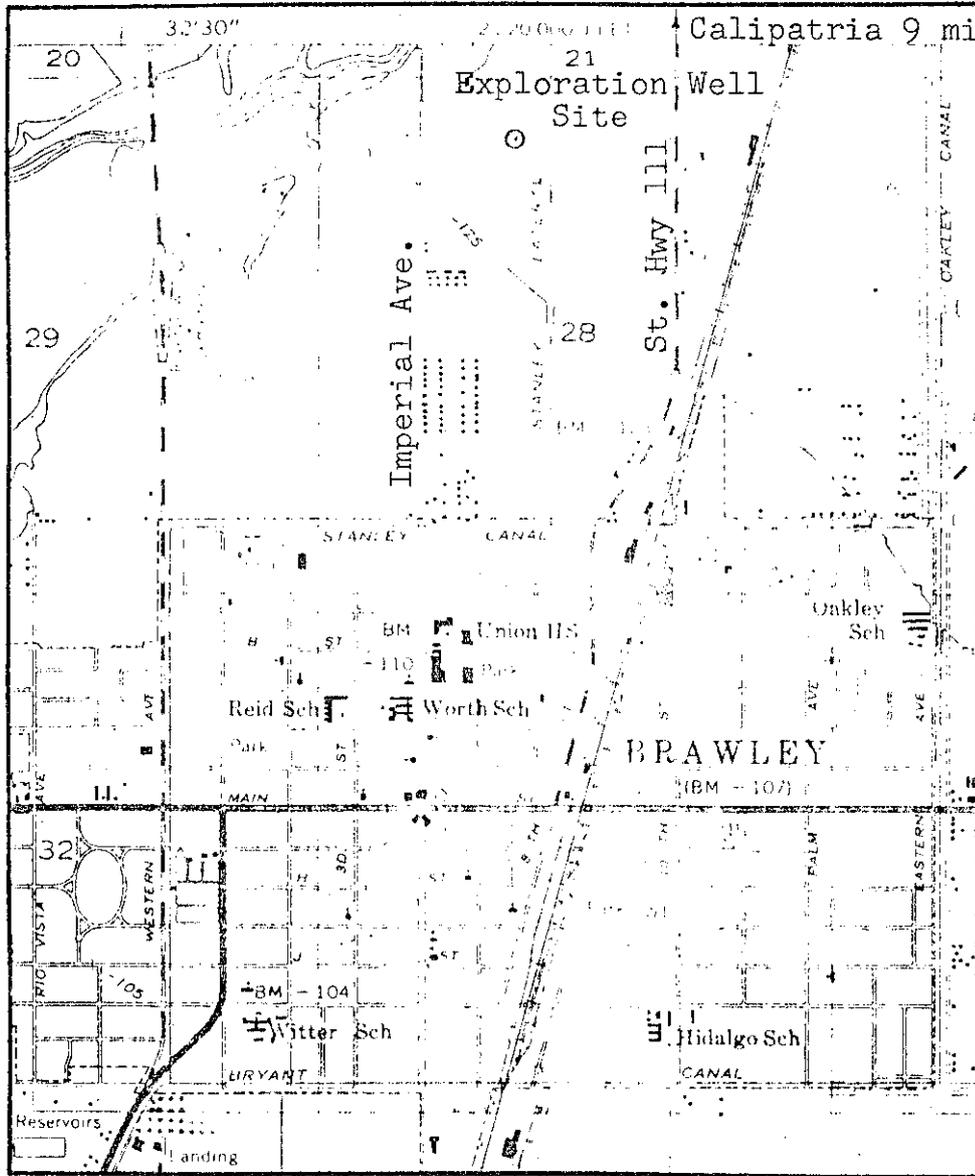
Mail reports to:

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

ORDERED BY

Arthur Sevajian
Executive Officer

January 26, 1977
Date



SITE MAP
FOR
FOR
McCULLOUGH OIL CORPORATION
Brawley Area - Imperial County
E $\frac{1}{2}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$ of Section 28, T14S, R14E, SBB&M
U.S.G.S. Brawley 15 min. Topographic Map