

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 79-41 (REVISION No. 1)

FOR

BIG CHIEF GROUP

Northeast of Glamis - Imperial County

Location: 1 mi. S and 1/8 mi. W of SE corner of
Section 32, T12S, R19E, SBB&M

MONITORING

Mineral Recovery Systems, Inc. shall report to the Regional Board concerning the following:

MONITORING AND REPORTING NO. 1

Mineral Recovery Systems, Inc. shall submit to the Regional Board quarterly reports containing the following information:

- A. The current status of mining operations - whether the operation is active or inactive.
- B. An estimate of the total amount of ore (tons) that has been processed to date.

MONITORING AND REPORTING NO. 2

- A. 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.
- B. Upon request from this Board's Executive Officer, the discharger shall furnish technical and/or monitoring reports on the treatment and discharge of wastes.
- C. At least thirty (30) days prior to any proposed discharge of ore tailings or wastewater, or termination of the operation described in this Order, the discharger shall submit a copy of the results of analysis of cyanide concentration of wastewater, and shall request a Regional Board staff inspection to approve the proposed discharge or cleanup procedure.
- D. Report of completion of cleanup of premises shall be submitted to the Regional Board in writing within one week following completion of work.

REPORTING

The above monitoring program shall be implemented immediately upon adoption of this Order.

Quarterly reports shall be submitted to the Regional Board by January 15, April 15, July 15 and October 15 of each year. Reports for Items 2 A, B, C, and D (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

August 9, 1981
Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 79-41

WASTE DISCHARGE REQUIREMENTS
FOR

BIG CHIEF GROUP
Northeast of Glamis - Imperial County

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

1. Mineral Recovery Systems, Inc. (hereinafter also referred to as the discharger), 1000 Quail Street, Suite 130, Newport Beach, CA 92660, submitted a Report of Waste Discharge dated July 26, 1978.
2. The discharger proposes to separate gold and silver from mined ore by using the heap leaching process. This process would consist of stacking a total of about 50,000 tons for each load of broken ore on an impervious pad over a period of two months to one year. The ore would be periodically sprinkled with a solution containing 750 mg/l of sodium cyanide (NaCN) and 10 mg/l of sodium hydroxide (NaOH). The solution would leach through the ore to the pad where it is to be collected for recycling through a closed system. The closed system (comprised of holding tanks, pipes, settling basins and processing equipment) and the leaching pad will not contain more than 75,000 gallons at any given time. The leaching pad, designated as the only disposal site, is to be located (in a non-surveyed area) about 1 mile south and 1/8 mile west of the SE corner of Section 32, T12S, R19E, SBB&M, which is about 6.1 miles northeast of Glamis and approximately 900 feet north of Highway 78.
3. The discharger describes the impervious leaching pad as a 12 inch layer of compacted soil that would be covered with 2 inches of asphalt and coated with a pliable material, such as pitch. About 2 feet of crushed rock would serve as the leaching medium. The settling basins would be constructed to also be impermeable.
4. The discharger states that at the end of all operations at this site chlorine would be added to neutralize all cyanide present.

5. The Water Quality Control Plan for the West Colorado River Basin was adopted by the Board on April 10, 1975. The Basin Plan contains water quality objectives for the Amos-Ogilby Hydrologic Unit.
6. The beneficial use of the groundwaters of the Amos-Ogilby Hydrologic Unit is agricultural supply.
7. The discharger reports the depth to groundwater at the site is in excess of 50 feet. The supply water used for this heap leaching operation is to be piped from a well located about 1/4 mile west of the pad site.
8. The discharger is hereby informed that there are no Class I solid waste disposal sites in the Colorado River Basin Region at this time.
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 proposed discharge.
11. The Imperial County Planning Department has approved on June 13, 1979 an Environmental Impact Report 201-78 for this proposed mining operation. This report indicates that this project would not have any significant adverse effects on the quality of local groundwaters and of any surface waters resulting from infrequent storm runoff.

IT IS HEREBY ORDERED, the discharger shall comply with the following:

A. Discharge Specifications

1. Neither the mining process nor the discharge of wastewater or other wastes shall create a pollution or a nuisance as defined in Division 7 of the California Water Code.
2. The cyanide solution shall be contained only in the processing system or leak-proof containers.
3. There shall be no wind transport of cyanide solution away from the leaching pad.
4. The leaching pad and settling basins shall have a permeability which does not exceed 1×10^{-6} cm/sec.
5. All drainage and collection facilities used to contain or transport leaching solution or ore wash water shall be effectively sealed to prevent exfiltration of these liquids.

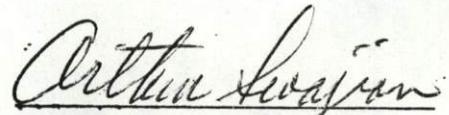
6. A minimum freeboard of at least two (2) feet shall be maintained in the impervious pad and settling basins.
7. The processing area shall be protected from any washout or erosion which could occur as a result of floods having a predicted frequency of once in 100 years.
8. There shall be no discharge of wastewater containing any trace of cyanide at any location not approved by the Regional Board.
9. Prior to the removal of ore tailings from the impervious pad, the cyanide contained therein shall be neutralized and said tailings shall be discharged in an area permanently protected from a flood having a predicted frequency of once in 100 years.
10. Ore tailings may be abandoned on the pad, provided the cyanide in the ore is neutralized and said tailings are permanently protected from a 100 year flood. Lack of construction or operational activity on the site for a period of one year shall constitute abandonment for the purposes of this Order.
11. All industrial containers and other waste materials shall be discharged at a Class I solid waste disposal site, or neutralized and discharged at a Class II-2 disposal site, provided said discharged wastes are immediately covered. Said containers shall be rendered unusable prior to final disposal.
12. Adequate measures shall be taken to assure that unauthorized persons and animal pets are effectively excluded from the processing area.

B. Provisions

1. The discharger shall submit to the Board, at least 10 days prior to commencement of operations, a technical report showing the construction of said pad, basins and flood protection facilities, and a certificate signed by a California Registered Civil Engineer stating that the pad, basins and attendant facilities are constructed to meet the requirements of this Order.
2. The discharger shall comply with the "Monitoring and Reporting Program No. 79-41", and the "General Provisions for Monitoring and Reporting", and future revisions thereto, as specified by the Executive Officer.
3. Prior to any modifications in this facility which could result in material change in the quality or quantity of wastes discharged, or any material change in location of discharge, the discharger shall report thereon to the Board.

4. In the event of any change in operation, or in control or ownership of land or waste disposal facilities owned or controlled by the discharger, the discharger shall:
 - a. Notify this Board of such change; and
 - b. Notify the succeeding owner or operator by letter of the existence of this Order, a copy of which shall be filed with this Board.

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 November 28, 1979.


Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 79-41
FOR

BIG CHIEF GROUP

Northeast of Glamis - Imperial County

Location: 1 mi. S and 1/8 mi. W of SE corner of
Section 32, T12S, R19E, SBB&M

MONITORING

Mineral Recovery Systems, Inc. shall report to the Regional Board concerning the following:

MONITORING AND REPORTING NO. 1

Mineral Recovery Systems, Inc. shall submit to the Regional Board monthly reports containing the following information:

- A. The current status of mining operations - whether the operation is active or inactive.
- B. An estimate of the total amount of ore (tons) that has been processed to date.

MONITORING AND REPORTING NO. 2

- A. 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.
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- C. At least thirty (30) days prior to any proposed discharge of ore tailings or wastewater, or termination of the operation described in this Order, the discharger shall submit a copy of the results of analysis of cyanide concentration of wastewater, and shall request a Regional Board staff inspection to approve the proposed discharge or cleanup procedure.
- D. Report of completion of cleanup of premises shall be submitted to the Regional Board in writing within one week following completion of work.

REPORTING

The above monitoring program shall be implemented immediately upon adoption of this Order.

Monthly reports shall be submitted to the Regional Board by the 15th day of the following month. Reports for Items 2 A, B, C, and D (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.

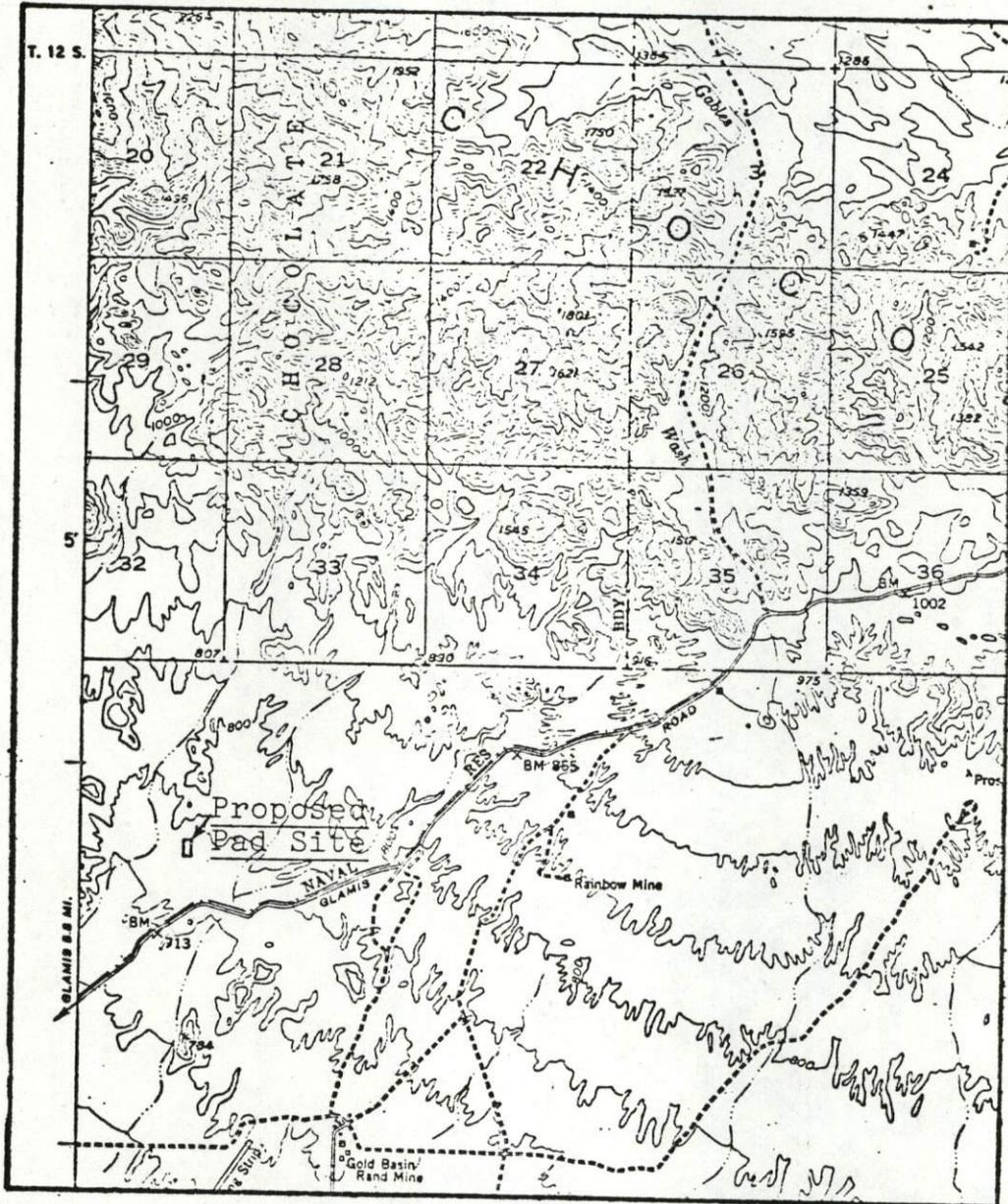
Mail reports to:

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

ORDERED BY

Arthur Swajan
Executive Officer

November 28, 1979
Date



SITE MAP NO. 1

BIG CHIEF GROUP

Northeast of Glamis - Imperial County
Location: 1 mile south and 1/8 mile west of the
SE corner of Section 32, T12S, R19E, SBB&M
USGS Quartz Peak 15 min. Topographic Map

Order No. 79-41