

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 77-34

WASTE DISCHARGE REQUIREMENTS
FOR
HOPKINS AND ASSOCIATES, LJ-1 MINE
Southeast of Lucerne Valley - San Bernardino County

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

1. Mr. K. N. Thanstrom, on behalf of Hopkins and Associates (hereinafter also referred to as the discharger), 3700 Las Vegas Blvd., Las Vegas, Nevada 89109, submitted a Report of Waste Discharge dated February 1, 1977.
2. The discharger is separating gold and silver from mined ore by using the heap leaching process. This leaching process consists of stacking a total of about 20,000 tons of broken ore on an impervious pad over a period of 3 to 4 years. The ore is periodically sprayed with a solution containing 650 mg/l of sodium cyanide (NaCN) and 2,400 mg/l of lime. The solution leaches through the ore to the pad where it is collected for recycling through a closed system. The closed system (comprised of holding tanks, pipes and processing equipment) and the leaching pad will not contain more than 28,000 gallons at any given time. The leaching pad, designated as the only disposal site, is located in the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 9, T3N, R2E, SBB&M.
3. The discharger describes the impervious leaching pad as a 12 inch layer of soil mixed with Bentonite, covered with a 30 mill rubber membrane liner and topped with 6 to 10 inches of sand. A 20 mill plastic safety liner is installed underneath the pad to detect any seepage.
4. The discharger states that at the end of all operations at this site, sodium hypochlorite will be added to neutralize all cyanide present.

Rescinded
7/13/83

5. The discharger reports the depth to groundwater at the site is in excess of 300 feet. The supply water used for this heap leaching operation is trucked from a spring located 3 miles south of the mine.
6. The beneficial uses of the groundwaters of the Lucerne Hydrologic Unit are:
 - a. Municipal supply
 - b. Industrial supply
 - c. Agricultural supply
7. The Water Quality Control Plan for the West Colorado River Basin was adopted by the Board on April 10, 1975, and this Order implements the objectives stated in the Plan.
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.

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

A. Discharge Specifications

1. Neither the treatment nor the discharge of wastewater shall cause a pollution or a nuisance.
2. There shall be no surface flow of wastewater away from the processing area.
3. There shall be no seepage from the leaching pad.
4. 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.

5. A minimum freeboard of at least two (2) feet shall be maintained in the impervious pad.
6. 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.
7. There shall be no discharge of wastewater containing any trace of cyanide at this location. The discharge shall not exceed 28,000 gallons, and there shall be no discharge to any drainage channel.
8. 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.
9. 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.
10. All containers and other waste materials shall be discharged at a Class I solid waste disposal site, or neutralized and discharged at a Class II disposal site provided said discharged wastes are immediately covered. All containers shall be rendered unusable prior to final disposal.
11. Adequate measures shall be taken to assure that unauthorized, persons and animals pets are effectively excluded from the processing area.

B. Provisions

1. The discharger shall submit to the Board, by not later than June 15, 1977, engineering plans and calculations for facilities to provide lateral runoff protection from a 100 year flood as required under Specifications A.6. and A.8. Any additional construction required for compliance with this Order shall be completed by July 15, 1977.

2. The discharger shall comply with the "Monitoring and Reporting Program No. 77-34", 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.
5. This Order is for processing a volume of ore not exceeding 20,000 tons.

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 May 18, 1977.

Arthur Swajian

EXECUTIVE OFFICER

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 77-34
FOR

HOPKINS AND ASSOCIATES, LJ-1 MINE
Southeast of Lucerne Valley - San Bernardino County
Location: SE¼, SW¼, Section 9, T3N, R2E, SBB&M

MONITORING

Hopkins and Associates shall report to the Regional Board concerning the following:

MONITORING AND REPORTING NO. 1

Hopkins and Associates 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.
- 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 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 the 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 Levajian

Executive Officer

May 18, 1977

Date

Order No. 77-34



SITE MAP # 2

HOPKINS AND ASSOCIATES

LJ-1 MINE

Southeast of Lucerne Valley - San Bernardino County
SW $\frac{1}{4}$, SW $\frac{1}{4}$ SECTION 9, T3N, R2E, SBB&M

Order No. 77-34