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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 82-57

WASTE DISCHARGE REQUIREMENTS
FOR
BLACKHAWK MINE
Southeast of Lucerne Valley - San Bernardino County

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

1. Blackhawk Mines Corporation (hereinafter also referred to as the discharger), P.O. Box 1190, Lucerne Valley, CA 92356, submitted a Report of Waste Discharge, effective date October 2, 1982.
2. The discharger proposes to recover gold and silver from mined ore by leaching cyanide solution through about 200 tons per day of crushed ore in a series of steel tanks located above the water course in a steep-walled canyon. The mixture would contain about two pounds of Sodium Cyanide (NaCN) per ton of ore, which is to be circulated through a closed system. After mixing and leaching in the tanks, the mixture would contain about 40% solids and 60% solution. The pregnant solution would then be piped through a carbon filter system, where the precious metals would be removed for further processing off-site. The barren solution would flow into a tank where cyanide would be added to restore the concentration to the necessary strength for recirculation. The tailings (consisting of 80% solids and 20% solution) would be neutralized with a Sodium Hypochlorite solution and then be saturated with slurry water to a mixture of 40% solids. The neutralized slurry would be piped about a half mile through a 6-inch underground line to an impervious tailings basin, which is located outside of the steep-walled canyon. The free solution in the tailings would be pumped back to the mill site through a 3-inch underground pipeline for reuse as slurry solution. The mill site is located (in an area not sectioned on government maps) about $\frac{1}{4}$ mile south and $\frac{1}{2}$ mile east of the SW corner of Section 8, T3N, R2E, SBB&M, which is about 9 miles south of State Highway 247.
3. The discharger proposes that the impervious basin would have a 1-foot layer of compacted soil covered with a 20 mil polyvinyl chloride (PVC) liner that would be protected with a layer of sand.
4. The discharger states that at the end of all operations at this site, Sodium Hypochlorite would be added to neutralize all cyanide present. The tanks would then be drained into the basin where the solution would evaporate leaving the neutralized tailings and basin liner at the site.

*Superseded
by 87-21 -
1/21/87*

5. 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 the Lucerne Hydrologic Unit.
6. The beneficial uses of the ground waters of the Lucerne Hydrologic Unit are:
 - a. Municipal supply
 - b. Industrial supply
 - c. Agricultural supply
7. The discharger reports the depth to ground water at the site is in excess of 280 feet. The supply water used for this leaching operation is to be pumped from a well at the mill site.
8. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the proposed discharge.
9. The Board in a public meeting heard and considered all comments pertaining to the discharge.
10. The San Bernardino County Environmental Analysis Division approved a Mitigated Negative Declaration (approval date April 28, 1981) for this proposed mining operation. The Regional Board has reviewed this Negative Declaration. The below waste discharge requirements are designed to assure against any significant adverse effects on water quality.

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 in leak-proof containers.
3. There shall be no wind transport of cyanide solution or ore containing cyanide solution away from the mill site facilities.
4. The containment basin liner shall have a permeability which does not exceed 1×10^{-8} cm/sec, and the fluids contained therein shall not penetrate through the lining during the containment period.
5. All drainage and collection facilities used to contain or transport solution shall be effectively sealed to prevent leakage.
6. A minimum impervious freeboard of at least two (2) feet shall be maintained around the tailings basin.

7. The processing areas shall be protected from any run-on, 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. Adequate measures shall be taken to insure that the liner will not be punctured for the duration of this activity.
10. Prior to removal of ore tailings from the impervious basin, any cyanide contained therein shall be neutralized to contain not more than 1.0 mg/kg (total CN^-), and said tailings shall be discharged in an area permanently protected from a flood having a predicted frequency of once in 100 years.
11. Ore tailings may be abandoned in the basin, provided any cyanide in the tailings is neutralized to contain not more than 1.0 mg/kg (total CN^-), 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.
12. All industrial containers and other waste materials shall be discharged at a Class I 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.
13. Adequate measures shall be taken to assure that unauthorized persons and large animals are effectively excluded from the processing area.
14. The mill site and each basin shall have a leakage detection system as deemed necessary by the Executive Officer of the Regional Board.
15. The mill site and the basin shall each be protected against storm water drainage during a maximum probable one hour storm, as deemed necessary by the Executive Officer.

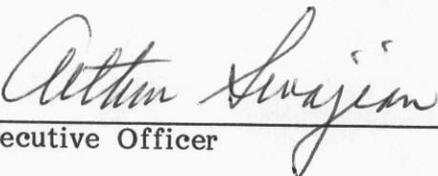
B. Provisions

1. At least 60 days¹ prior to commencement of construction, the discharger shall submit to the Board for approval by the Executive Officer a technical report which shall include a plan showing in detail the proposed construction of the tanks, basin, leakage detection system, pipelines and flood protection facilities.

¹60 days unless a lesser period is approved by the Executive Officer

2. At least 10 days prior to commencement of operations, the discharger shall submit to the Board a certificate, signed by a California Registered Civil Engineer, stating that the tanks, containment basin, attendant facilities, leakage detection system and pipelines are constructed in accordance with the technical report as approved by the Executive Officer to meet the requirements of this Order.
3. The discharger shall comply with the "Monitoring and Reporting Program No. 82-57", and future revisions thereto, as specified by the Executive Officer.
4. 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.
5. 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. Transmit a copy of this Order to the succeeding owner or operator, and a copy of the transmittal letter shall be filed with this Board.
6. The discharger shall submit to the Board, at least 30 days prior to commencement of operations, written adequate assurance that money is available, upon abandonment of facilities, in an amount sufficient to insure neutralization of all cyanide, plus cleanup and closure of the processing and tailings disposal sites in a manner that will not adversely effect water quality.
7. This Order prohibits the processing of ore at this site to exceed one million 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 November 17, 1982.


Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 82-57
FOR
BLACKHAWK MINE
Southeast of Lucerne Valley - San Bernardino County

Basin Location: Portion of the SE $\frac{1}{4}$ of Section 8, T3N, R2E, SBB&M
Mill Site: $\frac{1}{4}$ mile south and $\frac{1}{2}$ mile east of the SW corner of Section 8, T3N, R2E,
SBB&M

MONITORING

Blackhawk Mine Corporation (the discharger) shall report to the Regional Board concerning the following:

Monitoring and Reporting No. 1

The discharger 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.
- C. Analysis for cyanide in ground water from the ground water monitoring well(s), and of any water found in the seepage monitoring well(s).

Monitoring and Reporting No. 2

- A. Immediate reporting of any accidental spillage or release of waste material, including immediate measures being taken to correct same and limit detrimental effects.
- B. Upon request from this Board's Executive Officer, the discharger shall furnish special 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

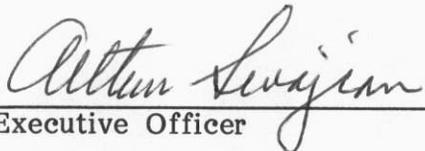
The above monitoring program shall be implemented immediately upon adoption of this Order.

Monthly reports shall be submitted to the Regional Board by the 15th day of the following month. Reports for Items 2A, 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. (619) 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

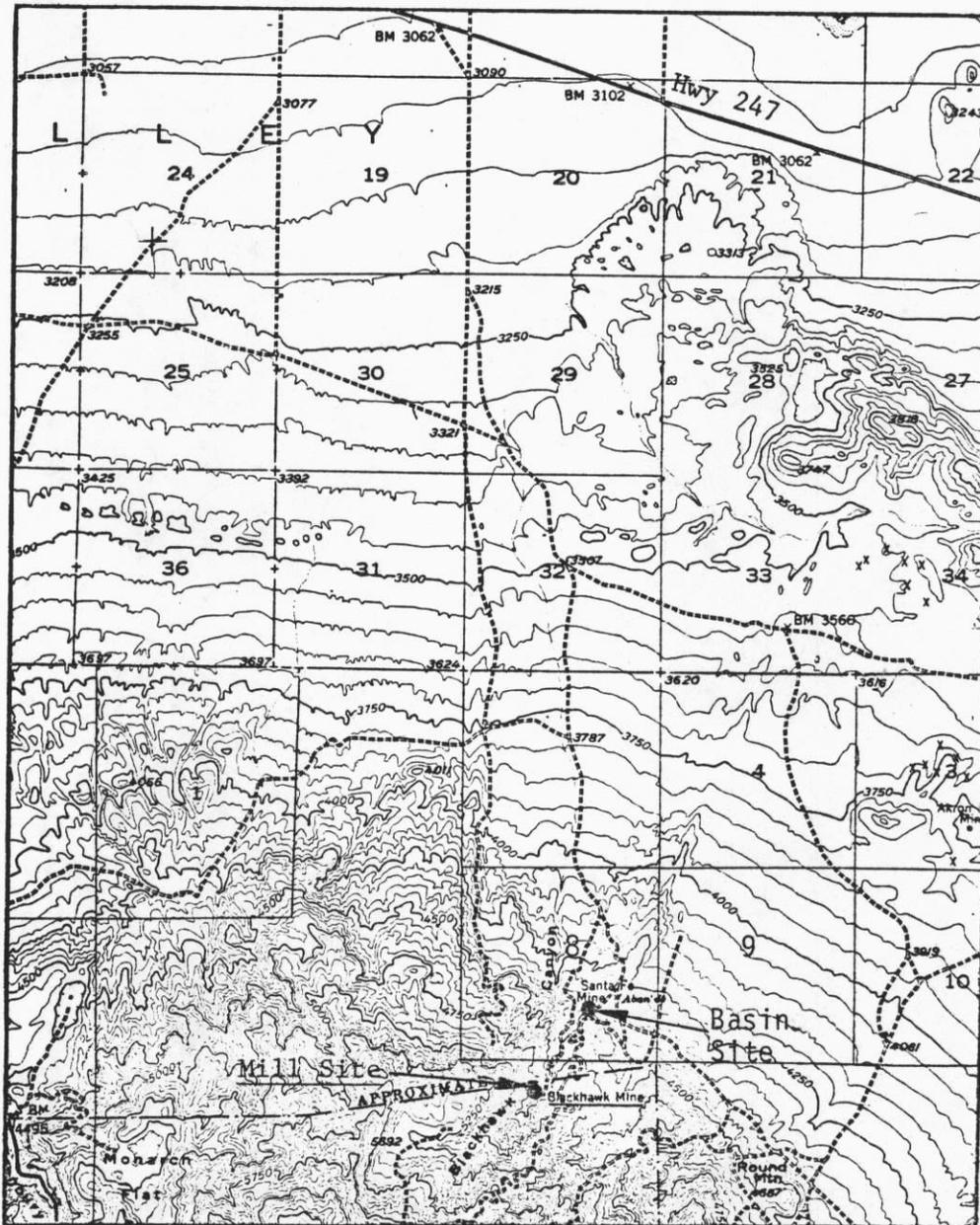
ORDERED BY:


Executive Officer

November 17, 1982

Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - 7



Scale:
1" = 1 mile

SITE MAP NO. 1

BLACKHAWK MINE

Southeast of Lucerne Valley - San Bernardino County

Basin Site: Portion of SE 1/4 of Section 8, T3N, R2E, SBB&M

Mill Site: 1/4 mi. south and 1/2 mi. east of the SW corner of Section 8, T3N, R2E, SBB&M

USGS Lucerne Valley 7.5 min. Topographic Map

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