

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 83-25
WASTE DISCHARGE REQUIREMENTS
FOR
AMERICA MINE
South of Amboy - San Bernardino County

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

1. America Mine Operator (hereinafter also referred to as the discharger), P. O. Box 25, Amboy, CA 92304, submitted updated information, dated December 30, 1982.
2. The discharger is recovering gold from mined ore by using the heap leach process. This process involves stacking a total of about 342,000 tons of broken ore on four impervious pads. At any one time, not more than 32,000 tons of ore is periodically sprinkled with a solution consisting of 1.5 pounds of sodium cyanide (NaCN) per ton of ore, and 2.1 pounds of sodium hydroxide (NaOH) per ton of ore (to maintain a pH in the effluent of 10.2.) The solution leaches through the ore to each pad dissolving the gold before draining into a sedimentation pond which drains into the pregnant solution pond. It is then pumped through apparatus that removes the gold. The remaining barren solution flows into four ponds where cyanide is added to bring it to the necessary concentration before recirculation onto the piles. The closed system, which includes the leaching pads, does not contain more than 500,000 gallons of cyanide solution at any given time. The operation is located in the SW $\frac{1}{4}$ of Section 18, T4N, R12E, SBB&M, which is about 3 miles southwest of the mine road turnoff on Amboy Road.
3. The discharger describes each impervious leaching pad (200 feet x 720 feet) as a layer of compacted soil that would be covered with four inches of dune sand, which would lie below a 20 mil chlorinated polyethylene (CPE) liner. A two foot high lined berm around each pad and four emergency storm basins (330 feet x 35 feet by 7.5 feet) insure containment in the event of overflow from flooding. These basins have an emergency storage capacity of two million gallons. The pregnant solution and the sedimentation basins each measure 75 feet x 35 feet x 7 feet deep with a 2 foot berm surrounding each. The barren solution basin is about 150 feet x 35 feet x 7.5 feet deep. The basins are also lined with 20 mil CPE plastic, which covers the tops of the berm.
4. The discharge from this mine has been subject to waste discharge requirements adopted in Board Order No. 79-107.
5. The discharger states that at the end of the proposed operation at this site, the remaining cyanide solution in the system would be discharged into the lined basins for complete solar evaporation, and later detoxified in the basins or disposed at a Board approved solid waste disposal site.

*Cancelled
5/21/80*

6. 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 Bristol Hydrologic Unit.
7. The beneficial uses of the ground waters of the Bristol Hydrologic Unit are:
 - a. Municipal supply
 - b. Industrial supply
 - c. Agricultural supply
8. The discharger reports the depth to ground water at the site is in excess of 300 feet. The supply water used for this heap leaching operation is piped from two wells, one at the site and one about one mile northeast of the pads.
9. The Board has notified the discharger and interested agencies and persons of its intent to update waste discharge requirements for the discharge.
10. The Board in a public meeting heard and considered all comments pertaining to the discharge.
11. The San Bernardino County Environmental Analysis Division has approved Negative Declaration EAD 79M-0007 (approval date October 23, 1979) for this mining operation. This report indicates that this mining process would not have any significant adverse effects on the quality of local ground waters and on 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 in leak-proof containers.
3. There shall be no wind transport of cyanide solution or ore containing cyanide away from the leaching area.
4. Any plastic material liner proposed to underline a leaching pad or basin 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 leaching solution shall be effectively sealed to prevent leakage of these liquids.

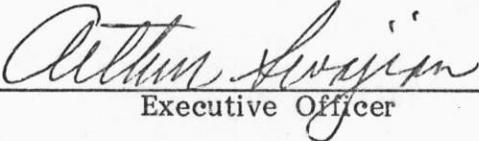
6. A minimum impervious freeboard of at least two (2) feet shall be maintained around each impervious heap leach test pad and in the sedimentation, pregnant and barren solution basins.
7. The processing area shall be protected from any run-on, washout, or erosion which could occur as a result of floods having a predicted frequency of once in 100 years.
8. There shall be no discharge of process wastewater at any location without prior approval from the Regional Board.
9. Adequate measures shall be taken to insure that the liners will not be punctured for the duration of this activity.
10. Prior to removal of ore tailings from each impervious pad, the cyanide contained therein shall be detoxified 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 on the pads, provided the cyanide in the ore is detoxified to contain not more than 1.0 mg/kg (total CN^-), and said tailings are permanently protected from a 100 year flood.
12. All industrial containers and other waste materials shall be discharged at a Class I waste disposal site, or detoxified 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 mammals are effectively excluded from the processing areas.
14. The leaching pads, the barren solution basins and the pregnant solution basin shall each have a leakage detection system as deemed necessary by the Executive Officer of the Regional Board.
15. The entire processing area shall be diked to impound all storm water drainage from the pads and basins during a maximum probable one hour storm, in addition to the total volume of cyanide solution contained in the closed system.

B. Provisions

1. At least 30 days from the adoption date of this Order, 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 a leakage detection system for the pads and basins.
2. At least 30 days from the date of approval of the technical report by the Executive Officer, the discharger shall submit to the Board a certificate, signed by a California Registered Civil Engineer, stating that the leakage detection system is constructed in accordance with the report to meet the requirements of this Order.

3. The discharger shall comply with the "Monitoring and Reporting Program No. 83-25", 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 file a copy of the transmittal letter with this Board.
6. The discharger shall submit to the Board, not more than 30 days from the adoption date of this Order, written adequate assurance that money is available, upon abandonment of facilities, in an amount sufficient to insure detoxification 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. Lack of construction or operational activity on the site for a period of one year shall constitute abandonment for the purposes of this Order.
8. This Order prohibits the processing of ore at this site to exceed 342,000 tons.
9. This Order supersedes Board Order No. 79-107.

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, 1983 .


Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 83-25
FOR
AMERICA MINE
South of Amboy - San Bernardino County

Location of Discharge: SW $\frac{1}{4}$ of Section 18, T4N, R12E, SBB&M

MONITORING

America Mine Operator (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 as to whether the operation is active or inactive.
- B. An estimate of the total amount of ore (tons) that has been processed to date.
- C. Any monitoring data of the leakage detection system as required by the Executive Officer.

Monitoring and Reporting No. 2

- A. Immediate reporting of any accidental spillage, leakage, 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, and on the integrity of the cyanide solution containment system.
- C. At least thirty (30) days prior to any proposed discharge of leached ore residues or wastewater, or termination of the operation described in this Order, the discharger shall submit a copy of the results of analyses of the cyanide concentration in the tailings and wastewater, and shall request a Regional Board staff inspection to approve the proposed discharge or cleanup procedure.

*Rescinded by
86-44
5/21/86*

- 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.

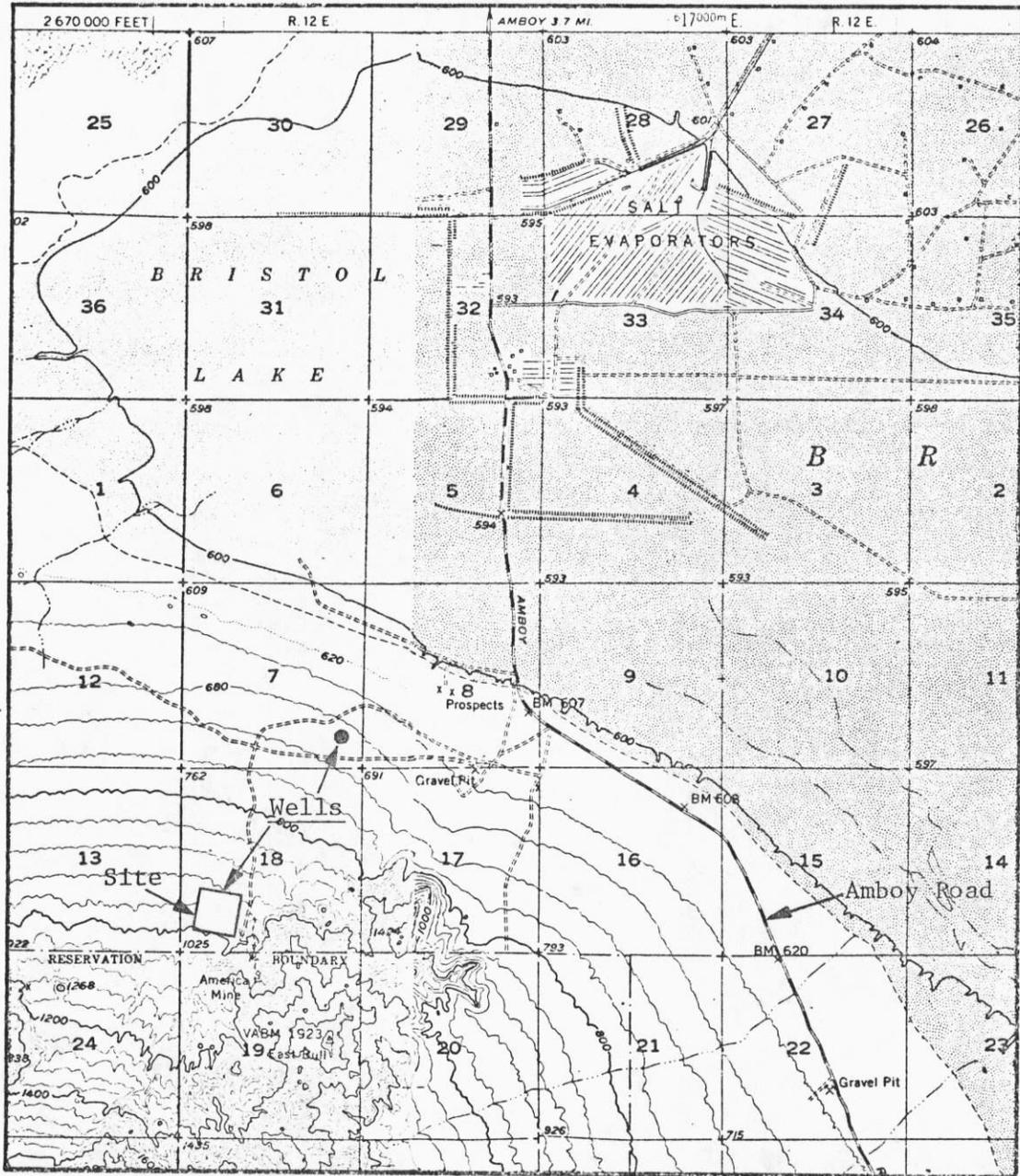
Mail reports to:

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

ORDERED BY:

Arthur Swajian
Executive Officer
5/25/83
Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - 7



SITE MAP
AMERICA MINE

South of Amboy - San Bernardino County
SW 1/4 of Section 18, T4N, R12E, SBB&M
USGS Bristol Lake and Lead Mt. Topographic Maps

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