## CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD COLORADO RIVER BASIN REGION

## ORDER NO. 87-52

## WASTE DISCHARGE REQUIREMENTS FOR CHUCKAWALLA MINING COMPANY Southwest of Blythe - Riverside County

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

- 1. Chuckawalla Mining Co., Inc. (hereinafter also referred to as the discharger), P.O. Box 999, 1212 Minna Street, Angels Camp, CA 95222, submitted a Report of Waste Discharge dated March 12, 1987, for their proposed mining operation.
- 2. The discharger proposes to recover gold and silver by leaching bromide solution through precious metal-bearing ore. The pilot plant operation will process up to 360 tons per day of ore in concrete vats while the expanded operation will process up to 6,000 tons per day on leach pads. The ore would be sprayed with the bromide solution and the pregnant solution allowed to drain into a containment basin. The pregnant solution would then be pumped to storage tanks for final processing on site. The barren solution would be returned to another basin where bromide would be added to restore the concentration to the necessary strength for recirculation. The tailings from the completed leaching process would be flushed with fresh water to reduce the concentration of bromide, and then replaced in the pit area from which the ore was extracted. The processing site is to be located (in non-sectioned government land) about 1-1/2 miles north and 1/2 mile east of the NE corner of Section 29, T8S, R17E, SBB&M.
- 3. The discharger proposes to construct the concrete vats within the leach pads which would be underlain by a 40-mil synthetic liner. The concrete vats would be removed for the expanded operation.
- 4. The discharger states that the solution transport ditches and all fluid containment basins would be lined with a 40-mil synthetic liner.
- 5. The discharger states that the tailings from the completed leaching process would be flushed with fresh water to reduce the concentration of bromide, and then replaced in the mine pit area. The flush water would be discharged to the barren solution basin for reuse in the leaching process.
- 6. The Water Quality Control Plan for the Colorado River Basin Region was adopted by the Regional Board on November 14, 1984. The Basin Plan delineates the location of the discharge to be in the Chuckwalla Hydrologic Unit.

Reservated Reservation 80 90-080

- 7. The beneficial uses of the ground water of the Chuckwalla Hydrologic Unit are:
  - a. Municipal supply
  - b. Industrial supply
  - c. Agricultural supply
  - 8. The discharger reports the depth to ground water at the site to be in excess of 400 feet. The supply water used for this leaching operation is to be hauled by truck from outside the mine site.
  - 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 Regional Board approved on May 20, 1987, a Negative Declaration SCH No. 87033002 for this proposed mining operation in accordance with the California Environmental Quality Act and State Guidelines. The below waste discharge requirements are designed to assure against any significant adverse effects on water quality.
- IT IS HEREBY ORDERED, that 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. There shall be no wind transport of bromide solution or ore containing bromide solution away from the processing facilities.
  - 3. The solution transport ditches shall be lined with a reinforced weather-resistant synthetic liner, which has a minimum thickness of 36 mils and a permeability which does not exceed 1 x  $10^{-7}$  cm/sec.
  - 4. The solution containment basins shall be underlain by a double synthetic liner with a leachate collection and removal system installed between the two liners. Each synthetic liner shall have a permeability which does not exceed 1 x  $10^{-7}$  cm/sec. The bottom liner shall have a minimum thickness of 40 mils. The upper liner shall be a reinforced weather-resistant synthetic material with a minimum thickness of 36 mils. The liners shall extend over the top of the basins. Other design details for protection of the quality of State waters shall be as approved by the Regional Board's Executive Officer.
  - 5. A minimum freeboard of two (2) feet shall be maintained around the containment basins.
  - 6. A dike with a minimum freeboard of two (2) feet covered with a weatherresistant synthetic liner of at least 36 mil thickness shall be maintained around the base of the leach pad to prevent runoff. The synthetic liner shall have a permeability which does not exceed 1 x  $10^{-7}$  cm/sec.

- 7. The mill site where the precious metals recovery operation is conducted shall be underlain by a sealed containment system to capture any pregnant (metalladen) solution escaping the process system through spillage or systems failure.
- 8. The entire 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.
- 9. The entire processing area shall be diked to impound all storm water drainage from the solution collection facilities and basins during a probable maximum one hour storm event in addition to the 24-hour solution draindown. Also, standby emergency facilities shall be available to assure containment of stormwater drainage and of the leaching solution.
- 10. There shall be no discharge of process wastewater at any location without prior approval from the Regional Board.
- 11. Adequate measures shall be taken to ensure that liners will not be punctured for the duration of this activity.
- 12. Leached ore tailings shall not be placed in perennial, intermittent, or ephemeral stream channels unless provision is made to divert runoff around the waste in a non-erosive manner. Waste shall not be placed where it can be eroded by streamflows or cause accelerated streambank erosion.
- 13. Any sampling, preservation, storage and analyses shall be conducted in accordance with current EPA procedures or in accordance with the thencurrent edition of Standard Methods for the Examination of Water and Wastewater. All hazardous waste chemical analyses shall be conducted at a laboratory certified by the State Department of Health Services or as approved by the Regional Board's Executive Officer.

## **B.** Provisions

- 1. At least 60 days<sup>1</sup> prior to commencement of construction, the discharger shall submit to the Regional Board for approval by the Executive Officer, a technical report which includes a hydrology report in accordance with the Riverside County Flood Control and Water Conservation District procedures, and a plan detailing the proposed construction of vats, leach pads, containment system, tailings basin, leakage detection system and flood protection facilities.
- 2. At least 10 days prior to commencement of operations, the discharger shall submit to the Regional Board a certificate, signed by a California Registered Civil Engineer, stating that the processing and containment facilities are constructed in accordance with the technical reports approved by the Executive Officer to meet the requirements of this Order.
- 3. At least 5 days prior to placing the synthetic liner over the base material, and at least 10 days prior to loading of ore onto the pad, the discharger shall notify the Regional Board to allow sufficient time to schedule a staff evaluation of the construction and inspection procedures utilized by the discharger.

<sup>T</sup>Unless a lesser period is approved by the Executive Officer

- 4. At least 30 days prior to commencement of operations, the discharger shall submit to the Regional Board, written adequate assurance that \$10,000 is committed, upon abandonment of facilities, to ensure proper cleanup and closure of the processing and tailings disposal sites in a manner that will not adversely affect water quality.
- 5. Prior to commencement of operation, the discharger shall furnish the Regional Board with the results of testing the leak detection system of each doublelined containment basin and any other leak detection system.
- 6. The discharger shall comply with the "Monitoring and Reporting Program No. 87-52", and future revisions thereto, as specified by the Executive Officer. The Monitoring Reports shall be certified to be true and correct, and signed, under penalty of perjury, by an authorized officer of the company.
- 7. Prior to any modifications in this facility which could result in material change in the quality or quantity of wastes discharged, quantity of ore processed, type of leachent used, or any material change in location of discharge, the discharger shall report thereon to the Board.
- 8. In the event of any change 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.
- 9. The discharger shall process no more than one million tons of ore under this Order.
- 10. Lack of construction or operational activity on the site for a period of one year after the effective date of this Order shall constitute abandonment for the purpose of requiring any necessary closure and cleanup, and for subsequent rescinding of this Order.
- 11. The discharger shall immediately inform the Executive Officer of any spillage beyond any of the containment facilities or elsewhere at the site, along with a proposal to correct same.
- 12. At least 30 days prior to cessation of operation and permanent closure of the facilities, the discharger shall submit a closure plan for approval by the Executive Officer.

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 \_\_\_\_\_\_\_\_\_\_.

Cultur Avapan Executive Officer

## CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD COLORADO RIVER BASIN REGION

## MONITORING AND REPORTING PROGRAM NO. 87-52 FOR CHUCKAWALLA MINING COMPANY Southwest of Blythe - Riverside County

Processing Site: 1-1/2 mile north and 1/2 mile east of the NE corner of Section 29, T8S, R17E, SBB&M

#### MONITORING

#### 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. The total volume of leachate removed from the leachate collection and removal system specified in Discharge Specification No. 5 of Board Order No. 87-52.

### 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.

### Reporting

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

Monthly reports for Items 1a, b, and c (above) shall be submitted to the Regional Board by the 15th day of the following month. Reports from Item 2a (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 for a period of one year, 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

May 20, 1987 Date



SITE MAP NO. 1

CHUCKAWALLA MINING COMPANY Southwest of Blythe - Riverside County Mill Site:  $1-\frac{1}{2}$  mile North and  $\frac{1}{2}$  mile East of the NE corner of Section 29, T8S, R17E, SBB&M USGS Chuckawalla Spring 15 min. Topographic Map

Order No. 87-52



# SITE MAP NO. 2

CHUCKAWALLA MINING COMPANY Southwest of Blythe - Riverside County

Order No. 87-52

N.