

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 82-31

WASTE DISCHARGE REQUIREMENTS
FOR
PICACHO PEAK MINE
North of Yuma - Imperial County

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

1. Chemgold, Inc. (hereinafter also referred to as the discharger), P.O. Box 2015, Yuma, Arizona 85364 submitted an updated Report of Waste Discharge, dated April 28, 1982.
2. The discharger proposes to expand, in phases, a heap leaching gold removal operation from 300,000 tons to 6 million tons of ore, which would be stacked to form a flat pile on one pad. A solution containing .05 percent or less Sodium Cyanide would be ponded to a depth of two inches over the top surface of this 20 foot high pile. A maximum of 100,000 tons of ore would be leached at any one time. Berms are constructed on top of the pile to allow thorough leaching of ore, and a berm would be extended along the perimeter of the pad to contain the leaching solution and any rainfall runoff. The solution containing the gold, drains from the pad into a lined containment basin, where it is pumped through a gold removal process, and then flows into a second lined basin, where cyanide is added to bring the concentration to the appropriate strength before it is recirculated onto the pile. This expanded closed system would not contain more than 250,000 gallons of free solution at any given time. The processing site is located (in a non-surveyed area) about 1 mile north and $\frac{1}{2}$ mile east of the NE corner of Section 16, T14S, R22E, SBB&M, which is about 18 miles north of Yuma, Arizona.
3. The discharger describes the impervious leaching pad as a layer of compacted soil that is covered with a 20 mil (0.020 in) thick P.V.C. (polyvinyl chloride) liner. About 18 inches of sand serves to protect the pad and acts as the leaching medium. The containment basins are lined with 36 mil CPER (chlorinated poly-ethylene reinforced plastic).
4. The discharger states that at the end of all operations at this site, chlorine would be added to neutralize all cyanide present. The neutralized solution would continually be recirculated onto the pile until all is absorbed in the tailings and evaporated in the closed system. The neutralized tailings and pad are reported to be the only wastes discharged at this site.
5. The discharge from this mining operation is also subject to waste discharge requirements adopted in Board Order No. 82-3.

Superseded
4/23/87
By 87-76

6. The Water Quality Control Plan for the East Colorado River Basin was adopted on April 10, 1975. The Basin Plan contains water quality objectives for the Colorado Hydrologic Unit.
7. The beneficial uses of the ground waters of the Colorado 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 150 feet. The supply water used for this heap leaching operation is piped from the Colorado River, which is about 4 miles northeast of the pad site.
9. The Board has notified the discharger and interested agencies and persons of its intent to update waste discharge requirements for the proposed discharge.
10. The Board in a public meeting heard and considered all comments pertaining to the discharge.
11. The Imperial County Planning Department has approved Environmental Impact Report SCH 81062603 (certification on September 8, 1982) for expansion of this mining operation. The below waste discharge requirements are designed to assure against any significant adverse effects on the quality of local ground waters 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 in leak-proof containers.
3. There shall be no wind transport of cyanide solution or ore containing cyanide solution away from the leaching pad.
4. The leaching pad liner and each 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 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 the impervious pad and in the containment 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 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 facility.
10. Prior to removal of ore tailings from the impervious pad, the 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 on the pad, provided the cyanide in the ore 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 mammals are effectively excluded from the processing area.
14. The pad and each basin shall have a leakage detection system as deemed necessary by the Executive Officer of the Regional Board.
15. The leach pad area and basins containing leachate, shall be diked to impound all storm water drainage from the pad and basins during a maximum probable one hour storm, in addition to the total volume of leachate contained in the closed system.

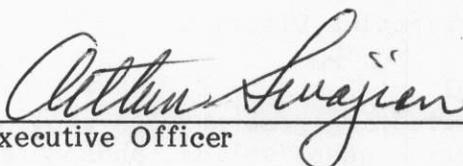
B. Provisions

1. At least 60 days¹ prior to commencement of construction of each phase, 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 pad, basins, leakage detection systems 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 of each phase, the discharger shall submit to the Board a certificate, signed by a California Registered Civil Engineer, stating that the pad, containment basins, attendant facilities, leakage detection systems, and disposal areas 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. 82-31", 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. Notify the succeeding owner or operator by letter of the existence of this Order, a copy of which shall be filed with this Board.
6. The discharger shall submit to the Board, at least 30 days prior to commencement of expanded 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 6 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 September 22, 1982.


Executive Officer

Master

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 82-31 (Revision No. 2)
FOR
PICACHO PEAK MINE
North of Yuma - Imperial County

Location: 1 mile north and $\frac{1}{2}$ mile east of NE corner Section 16, T14S, R22E, SBB&M.

MONITORING

Chemgold Inc. (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, and of any water found in the seepage monitoring wells.

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 ore tailings 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 wastewater and tailings, 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 operation site, and shall also be made available to staff of the Regional Board upon request.

Mail reports to:

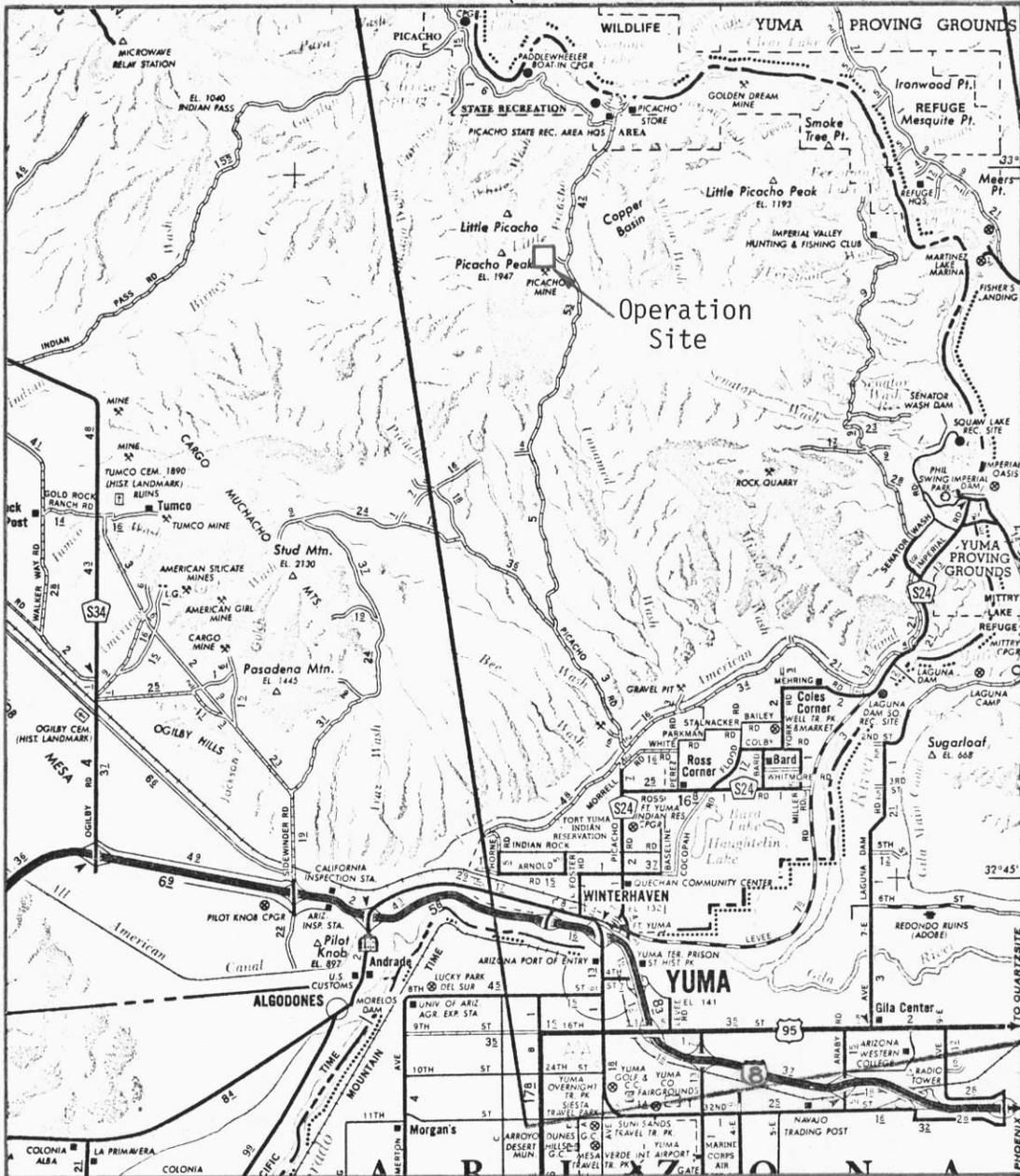
California Regional Water Quality Control Board
Colorado River Basin Region
73-271 Hwy 111, Suite 21
Palm Desert, CA 92260

ORDERED BY:

Arthur Sivajian
EXECUTIVE OFFICER

Dec-15, 1982
DATE

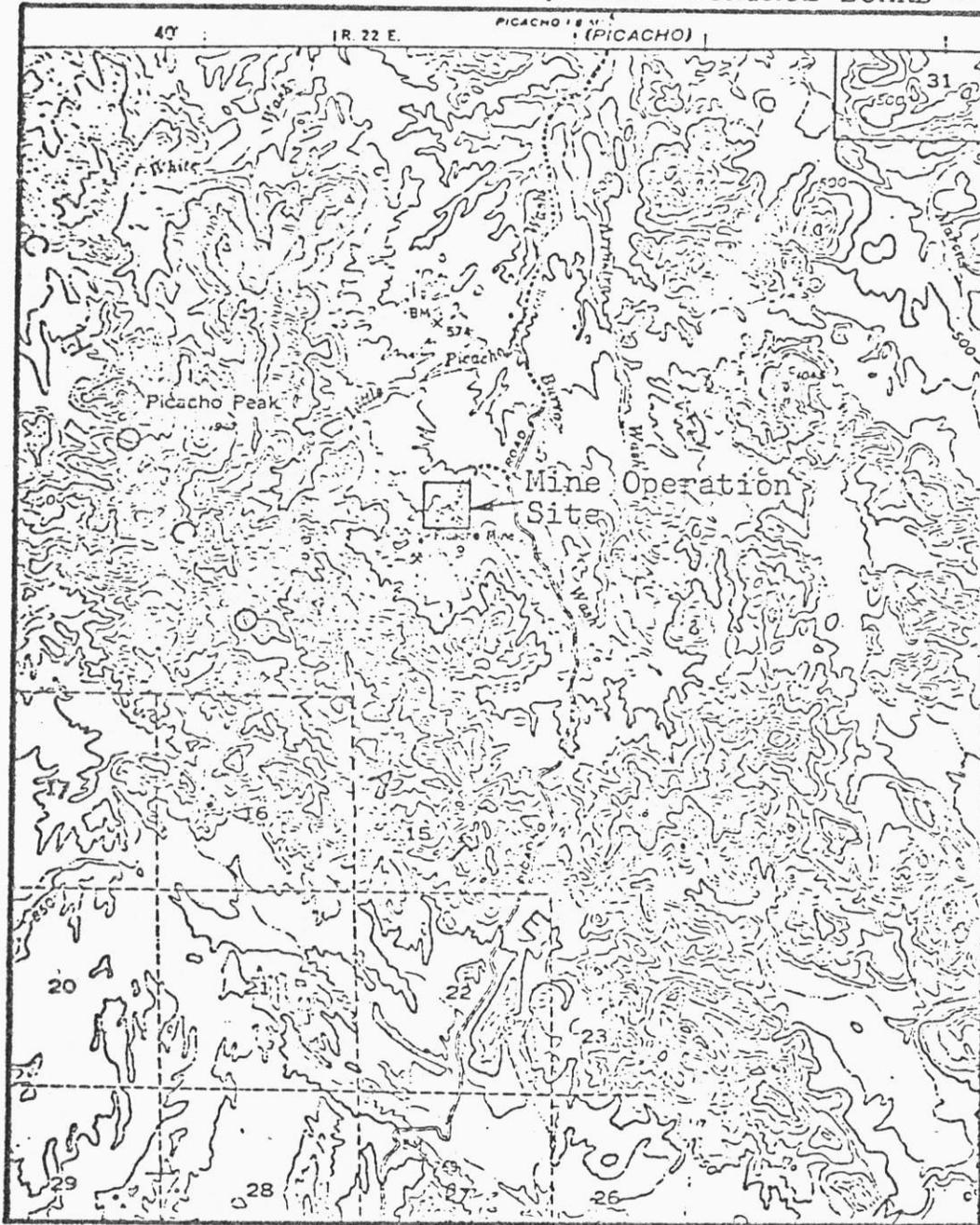
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - 7



Scale: 1"=4.5 mi.

SITE MAP NO. 1
 PICACHO PEAK MINE
 North of Yuma - Imperial County

Order No. 82-31



Scale
1" = 1 mi.

Winterhaven ↓ 12 miles

SITE MAP No. 2

PICACHO PEAK MINE

North of Yuma - Imperial County

Location: 1 mile north and 1/2 mile east of
NE corner of Section 16, T14S, R22E, SBB&M
USGS Picacho Peak 15 min. Topographic Map

Order No. 82 - 31

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

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- A. Immediate reporting of any accidental spillage, leakage, or release of waste material, and also, the immediate measures being taken to correct same and limit detrimental effects.
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REPORTING

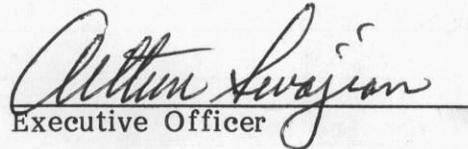
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Mail reports to:

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

ORDERED BY:


Executive Officer

September 22, 1982

Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 82-31 (Revision No. 1)
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Mail reports to:

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

ORDERED BY:

Arthur Livingston
EXECUTIVE OFFICER

November 1, 1982
DATE