

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 82-25
WASTE DISCHARGE REQUIREMENTS
FOR
RATTLE SNAKE MINE
Northwest of Needles - San Bernardino County

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

1. Great Southern Mines (hereinafter also referred to as the discharger), 4442 Lankershim Blvd. North Hollywood, CA 91602, submitted a Report of Waste Discharge dated March 15, 1982.
2. The discharger proposes to expand an operation that recovers gold and silver from mined ore by leaching cyanide solution through crushed ore that would be piled on three proposed impervious pads in addition to an existing pad. The process involves spraying the ore piles with a 0.1 percent solution of sodium cyanide (NaCN) and caustic soda, which would be recycled through a closed system. Approximately 12,000 tons of ore would be leached on each proposed pad and 5,000 tons on the existing pad. The leachate, containing gold, silver, and other metals, would drain from the pads into four, 4 foot deep, 18 foot diameter pregnant solution plastic lined tanks, and then be pumped through a filtration system to remove the gold and silver and then flow into another series of 4 foot by 18 foot plastic lined tanks. In these tanks, makeup water and cyanide would be added to bring the solution to the 0.1 percent concentration before recirculation onto the piles. About every six weeks the cyanide solution in this closed system, containing about 80,000 gallons, would be neutralized with Sodium Hypochloride, and the neutralized tailings would be discharged at a location approved by the Regional Board Executive Officer. The operation is to be repeated and would process approximately 360,000 tons per year of ore for ten years. The pad and basins are to be located in the SE $\frac{1}{4}$ of Section 19, T12N, R18E, SBB&M, which is about 10 miles southeast of the access road turnoff on Ivanpah Road.
3. The discharger describes each proposed impervious pads to each have a seven inch layer of sealed asphalt, or other equivalent or better liner that would cover a 150 foot square area.
4. The existing operation is subject to waste discharge requirements adopted in Board Order No. 80-41.
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 Ward Hydrologic Unit.
6. The beneficial uses of the ground waters of the Ward Hydrologic Unit are municipal supply and agricultural supply.

*Cancelled
5/16/84*

7. The discharger reports the depth to ground water at the site is in excess of 200 feet. The supply water used for this heap leaching operation is piped from a well about 700 feet northwest of the 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 has approved Negative Declaration EAD 1153-481N (approval date April 7, 1982) 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 leak-proof containers.
3. There shall be no wind transport of cyanide solution away from the leaching pads.
4. Each pad and basin liner shall have a permeability which does not exceed 1×10^{-6} 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 cyanide solution shall be effectively sealed to prevent exfiltration of these liquids.
6. A minimum impervious freeboard of at least two (2) feet shall be maintained around the impervious pads and at least one (1) foot in the basins.
7. The processing and neutralizing areas 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.
8. There shall be no discharge of wastewater containing any trace of cyanide at any location not approved by the Regional Board.
9. Prior to the removal of ore tailings from the tailings pads, the cyanide contained therein shall be neutralized to contain not more than 1.0 mg/kg total cyanide (CN); and said tailings shall be discharged in an area permanently protected from a flood having a predicted frequency of once in 100 years.

10. Ore tailings may be abandoned on the pads provided the cyanide in the tailings is neutralized to contain not more than 1.0 mg/kg total cyanide (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.
11. 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.
12. Adequate measures shall be taken to assure that unauthorized persons and mammals are effectively excluded from the processing and neutralizing areas.
13. Adequate measures shall be taken to insure that the liners would not be punctured for the duration of this facility.
14. Each pad shall have a leakage detection system as deemed necessary and as approved in writing 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.

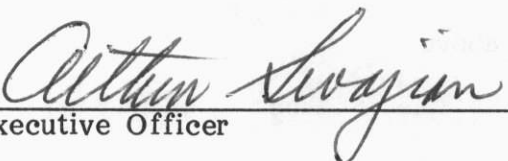
B. Provisions

1. At least 60 days¹ prior to commencement of construction, the discharger shall submit to the Board for approval by the Executive Officer a technical report including a plan showing the details of the proposed construction of the pads, basins, leakage detection systems and flood protection facilities.
2. At least 10 days prior to commencement of operations, the discharger shall submit to the Board:
 - (a) a certificate, signed by a California Registered Civil Engineer, stating that the pads, containment basins, attendant facilities, and leakage detection systems and disposal areas are constructed to meet the requirements of this Order.
 - (b) a copy of the results of the permeability analyses of liners.

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

3. The discharger shall comply with "Monitoring and Reporting Program No. 82-25", and future revisions thereto, as specified by the Executive Officer.
4. Prior to modifications in this facility which could result in material change in the quality or quantity of waste 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 operational 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 for the Regional Board Executive Officer's approval, at least 30 days prior to commencement of operation, 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.

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 19, 1982.


Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 82-25
FOR

RATTLE SNAKE MINE
Northwest of Needles - San Bernardino County

Location: Portion of SE $\frac{1}{4}$ of Section 19, T12N, R18E, SBB&M

MONITORING

Great Southern Mines (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.

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 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 the cyanide concentration in the wastewater, and in ore 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.

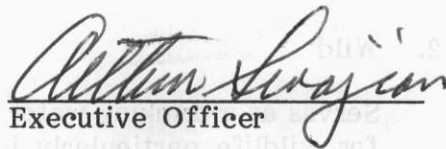
*Rescinded
5/16/84*

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

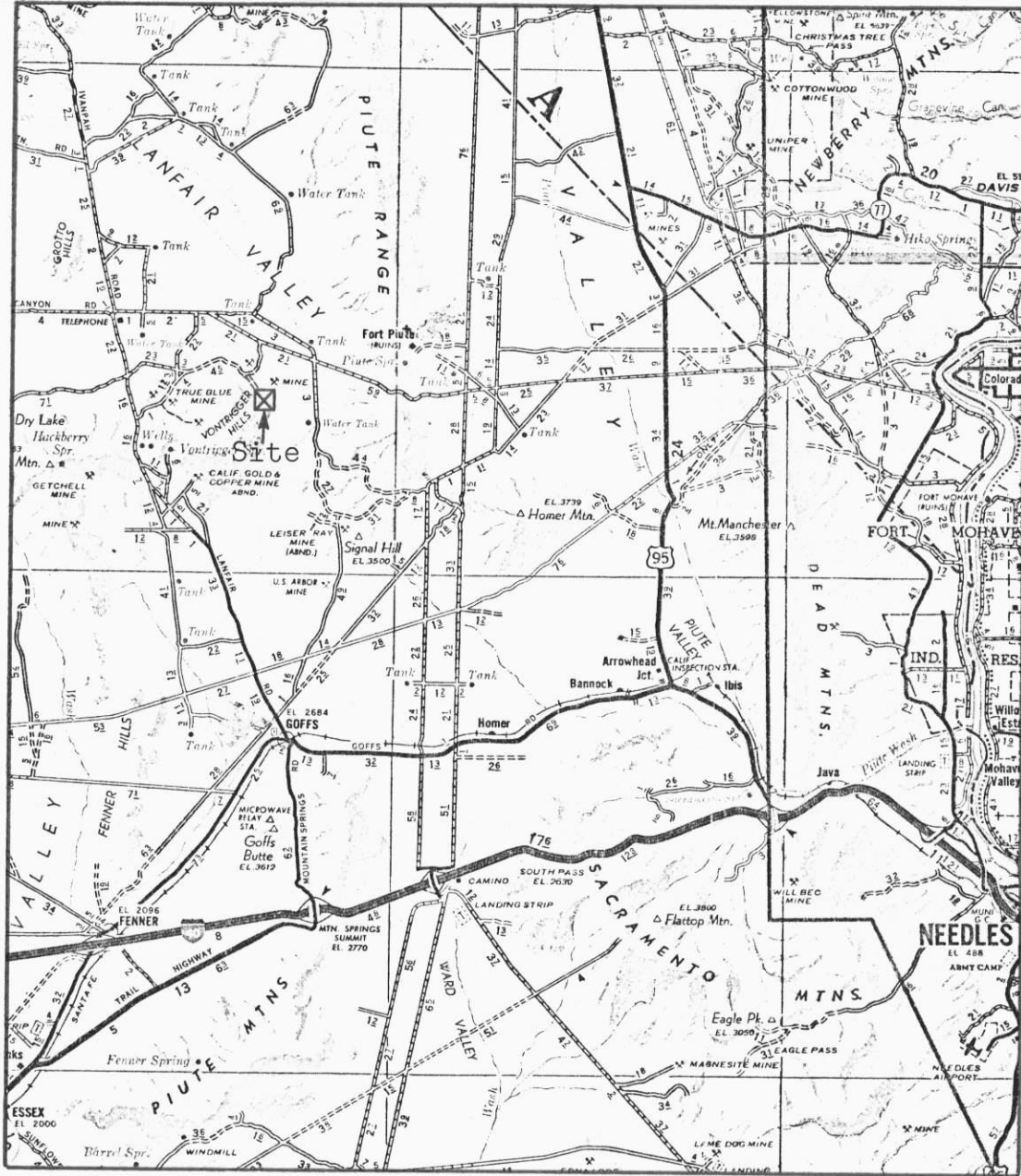
ORDERED BY


Executive Officer

May 19, 1982

Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - 7

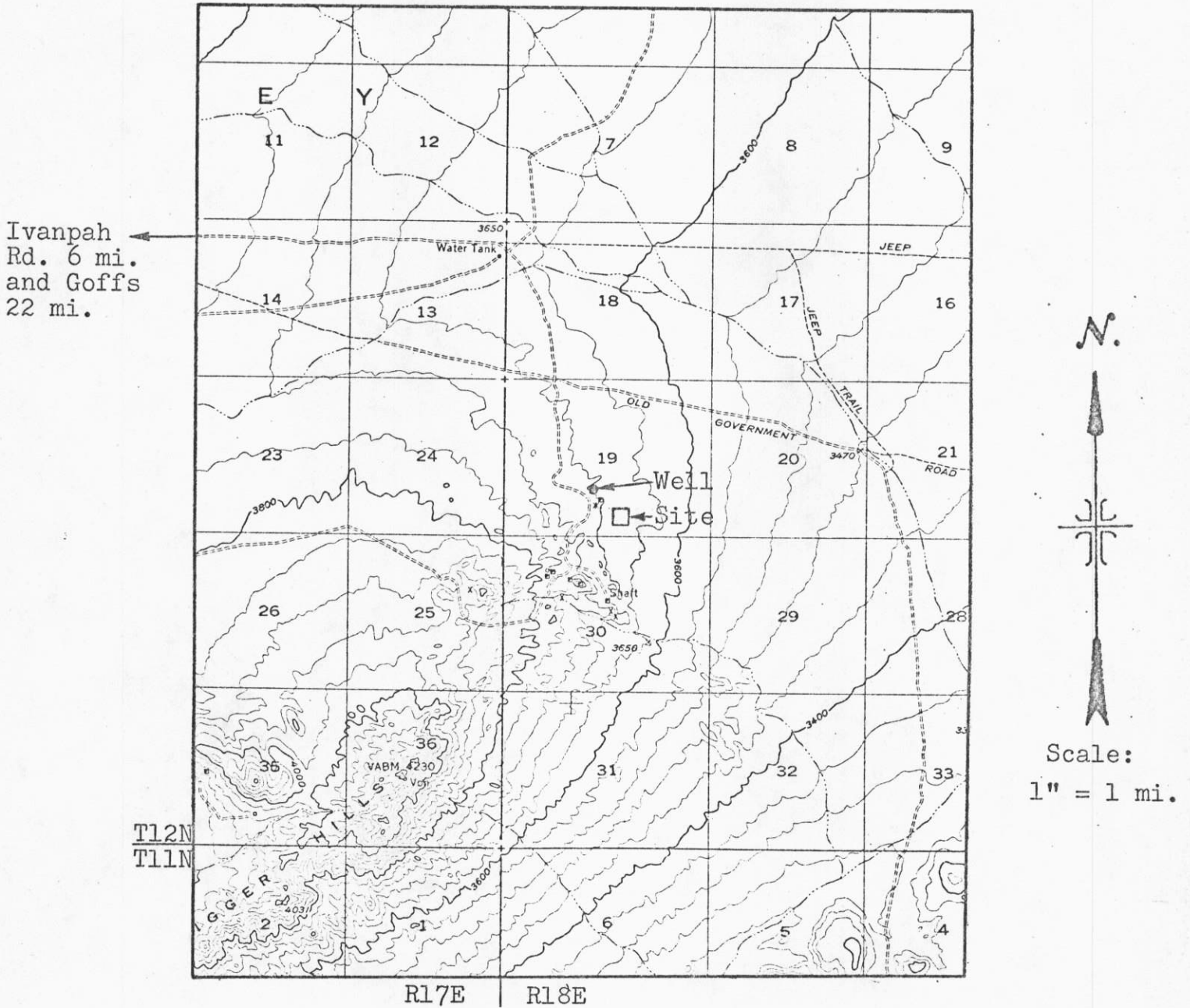


SITE MAP NO. 1

RATTLE SNAKE MINE
Northwest of Needles - San Bernardino County

Order No. 82-25

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - 7



SITE MAP NO. 2

RATTLESNAKE MINE
Northwest of Needles - San Bernardino County

Portion of SE $\frac{1}{4}$ of Section 19, T12N, R18E, SBB&M
USGS Landfair Valley 15 min. Topographic Map

Order No. 82-25