

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

ORDER NO. 87-39

**WASTE DISCHARGE REQUIREMENTS
FOR**

ONE TON MINE

JOE L. HALLOCK, OWNER

North of Lucerne Valley - San Bernardino County

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

1. Joe L. Hallock (hereinafter also referred to as the discharger), P.O. Box 827, Lucerne Valley, CA 92356, submitted a Report of Waste Discharge dated February 16, 1987.
2. The discharger is currently operating this mining facility at a capacity of 5 tons per day and has been in operation for more than five years without waste discharge requirements. The discharger states that the existing processing facilities would be abandoned and removed when the expanded facilities are fully operational.
3. The discharger proposes to expand the gold and silver mining operation from 5 tons per day to 200 tons per day. Gold and silver from mined ore will be recovered by leaching cyanide solution through about 200 tons per day of crushed ore in a series of steel tanks located above the water course. The mixture would contain about one-tenth (1/10th) of a pound 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 80% solids and 20% 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 90% solids and 10% solution) would be detoxified with a sodium hypochlorite solution. The detoxified tailings would be transported approximately 1200 feet to an impervious tailings basin, which is located above the water course. These tailings would be tank-washed and drained of all solutions during the detoxification prior to transportation to the tailings basin site. The processing site and the tailings basin site will be located in the NW 1/2 of the NW 1/4 of Section 12, T6N, R1W, SBB&M.
4. The discharger proposes to process and treat the ore in steel tanks mounted on concrete foundations above ground. A sealed concrete pad of adequate thickness with a concrete berm would be constructed around the processing steel tanks to contain any spillage or leakage of cyanide-bearing fluids.
5. The discharger proposes to construct a tailings basin with a 1-foot layer of compacted clay base covered with a 20 mil polyvinyl chloride (PVC) liner that would be protected with a layer of sand.
6. The discharger states that at the end of all operations at the processing site, sodium hypochlorite would be added to detoxify all cyanide present. The tanks

*Replaced
by 88-100*

would then be drained into the tailings basin where the solution would evaporate leaving the detoxified tailings and basin liner at the site.

7. The Water Quality Control Plan for the Colorado River Basin Region of California was adopted by the Regional Board on November 14, 1984. The Basin Plan delineates the location of the discharge to be in the Lucerne Hydrologic Unit.
8. The beneficial uses of the ground waters of the Lucerne Hydrologic Unit are:
 - a. Municipal supply
 - b. Industrial supply
 - c. Agricultural supply
9. The discharger reports the depth to ground water at the site to be in excess of 150 feet. The supply water used for this leaching operation is to be hauled by truck from wells located six miles from the mine site.
10. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the proposed discharge.
11. The Board in a public meeting heard and considered all comments pertaining to the proposed discharge.
12. The Regional Board approved on May 20, 1987, a Mitigated Negative Declaration SCH # 87032304 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. The cyanide solution shall be contained only in the processing and treatment system or in leakproof containers.
3. There shall be no wind transport of cyanide solution or ore containing cyanide solution away from the mill site facilities.
4. In accordance with the discharger's proposal, a sealed concrete pad of adequate thickness (as approved by the Regional Board's Executive Officer) with a concrete berm shall be constructed around the processing steel tanks to capture any spillage or leakage of cyanide-bearing fluids.
5. There shall be no discharge of process wastewater containing free cyanide in excess of 10 mg/l or of any other substances in hazardous concentrations as defined under Article 11, Division 4, Title 22 of the California Administrative Code, to the tailings basin or at any location not approved by the Regional Board.

6. All industrial waste materials, used cyanide containers, or other hazardous products shall be discharged at a waste management facility approved to receive these waste materials.
7. Adequate measures shall be taken to assure that unauthorized persons and large animals are effectively excluded from the processing area.
8. The processing area and the tailings basin shall each 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. Prior to discharge to the tailings basin, the ore tailings shall be detoxified to a concentration of 10 mg/l or less of free cyanide and then treated to reduce the concentration of any dissolved metals to below hazardous level, as specified under Article 11, Division 4, Title 22 of the California Administrative Code. The treated ore tailings shall meet the requirements for classification as a Group C mining waste as prescribed in Section 2571 of Subchapter 15, Chapter 3, Title 23 of the California Administrative Code.
10. All sampling, preservation, storage and analyses shall be conducted in accordance with current EPA procedures or in accordance with the then-current 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.
11. Upon cessation of the 5-ton per day operation, the processing facilities shall be properly decontaminated before abandonment or removal.

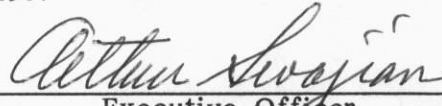
B. Provisions

1. At least 60 days¹ 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 San Bernardino County Flood Control District (SBCFCD) procedures and a plan detailing the proposed construction of the tanks, containment system, tailings basin, pipelines 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 report as approved by the Executive Officer to meet the requirements of this Order.
3. At least 10 days prior to loading of ore, onto the tanks, 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.
4. The discharger shall comply with the "Monitoring and Reporting Program No. 87-39", 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.

¹Unless a lesser period is approved by the Executive Officer

5. If conditions warrant, the Regional Board's Executive Officer may require the discharger to construct a vadose zone and ground water monitoring system, and the "Monitoring and Reporting Program No. 87-39" shall therefore be revised accordingly.
6. 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 leachant used, or any material change in location of discharge, the discharger shall report thereon to the Regional Board.
7. As proposed by the discharger and as stated in the findings,, the entire processing and treatment operation shall take place in steel tanks mounted on concrete foundations above ground. Any deviation from this proposal shall require the discharger to submit to the Regional Board a report of waste discharge and a technical report describing the proposed new mode of operation.
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 Regional 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 Regional Board.
9. 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 neutralization of all cyanide, plus cleanup and closure of the processing and tailings disposal sites in a manner that will not adversely affect water quality.
10. The discharger shall process no more than one million tons of ore under this Order.
11. 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 cleanup and closure, and subsequent rescinding of this Order.
12. The discharger shall immediately inform the Regional Board's Executive Officer of any spillage beyond any of the containment facilities or elsewhere at the site, and of any storm damage to any of the containment facilities, along with a proposal to correct same.
13. 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 Regional Board's 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 May 20, 1987.


Executive Officer

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

MONITORING AND REPORTING PROGRAM NO. 87-39

FOR

ONE TON MINE

JOE L. HALLOCK, OWNER

North of Lucerne Valley - San Bernardino County

Mine Site: NW 1/2 of the NW 1/4 of Section 12, T6N, R1W, 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 results of analysis for free cyanide from each batch of treated ore tailings prior to discharge to the tailings basin.

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 Regional Board's Executive Officer, the discharger shall furnish special technical and/or monitoring reports on the treatment and discharge of wastes.
- c. Prior to any proposed discharge of process wastewater outside the containment system, the discharger shall submit a copy of the results of analyses of cyanide and other hazardous substances that may be contained in the wastewater for review and approval by the Regional Board's Executive Officer.
- 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

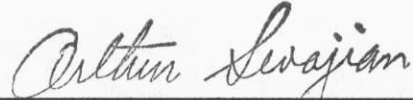
The above monitoring program shall be implemented immediately upon adoption of this Order.

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

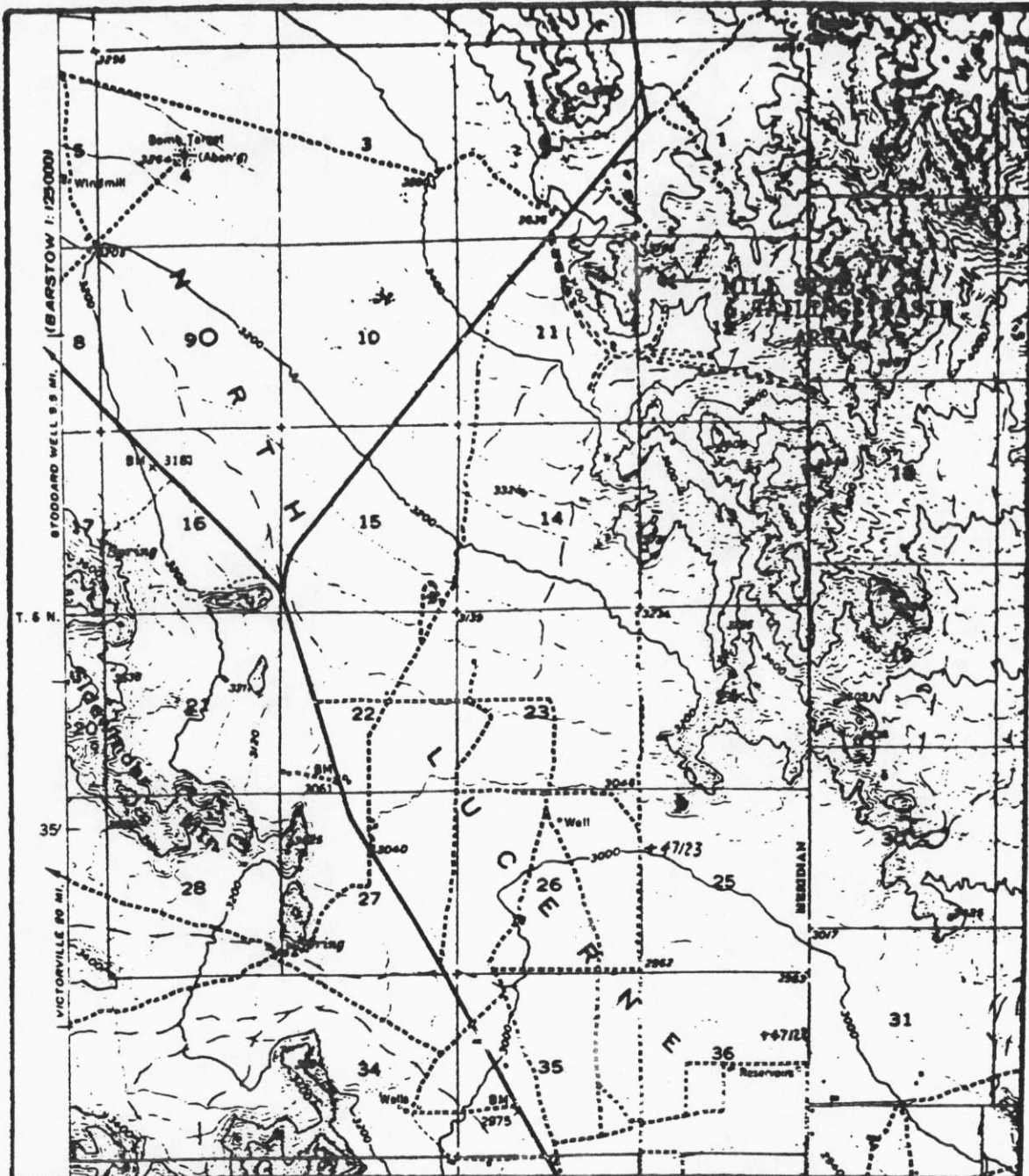


Executive Officer

May 20, 1987

Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - 7



SITE MAP NO. 1

ONE TON MINE

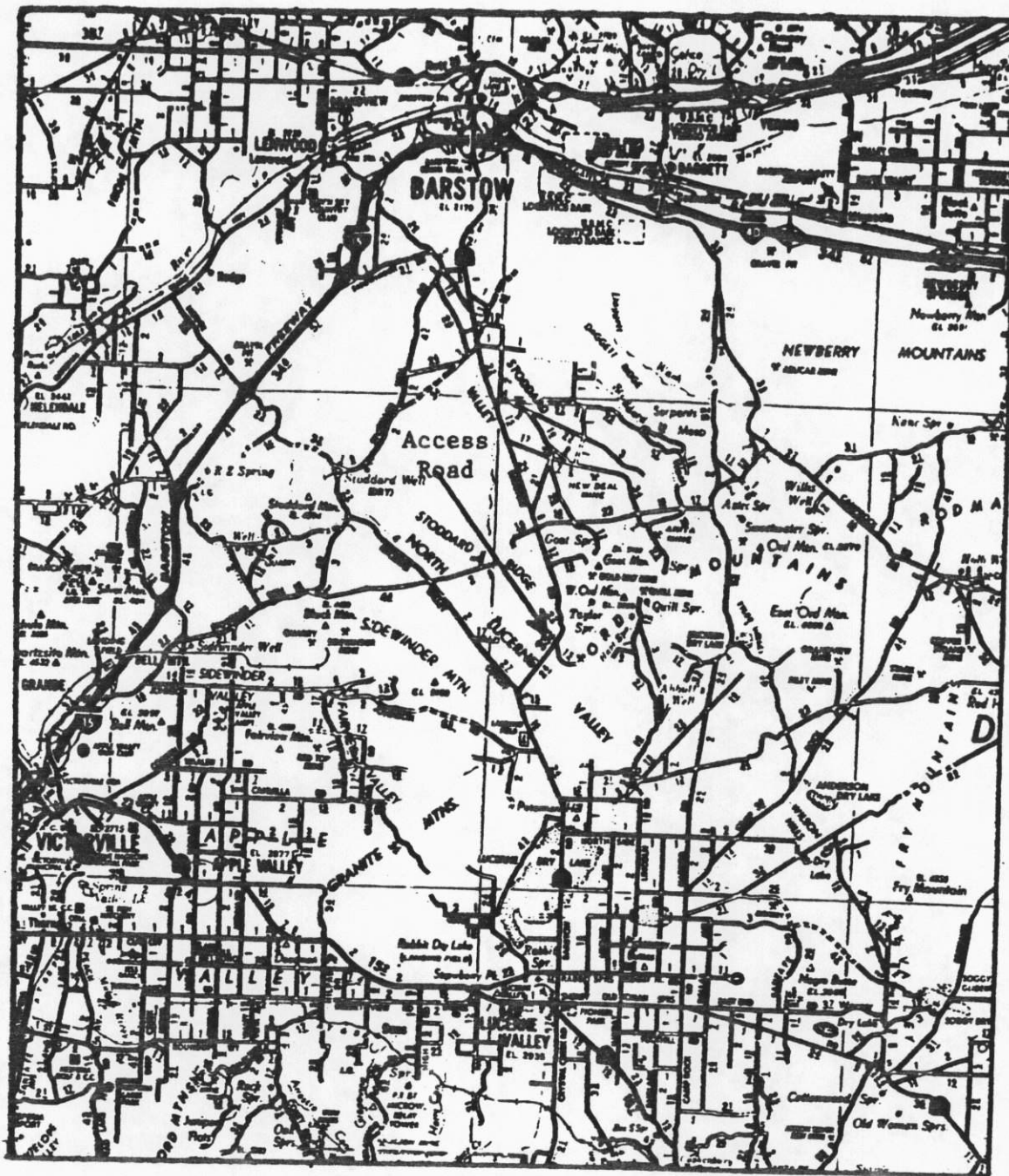
JOE L. HALLOCK, OWNER

North of Lucerne Valley - San Bernardino County

Mill Site: NW 1/2 of the NW 1/4 of Section 12, T6N, R1W, SBB&M

Order No. 87-39

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - 7



SITE MAP NO. 2

ONE TON MINE
 JOE L. HALLOCK, OWNER
 North of Lucerne Valley - San Bernardino County

Order No. 87-39