

JUN 2 0 1978

Environmental Protection

Yerington Mines Office of General Manager

Mr. Hugh Ricci, P. E. Environmental Specialist State of Nevada Division of Environmental Protection Capitol Complex Carson City, Nevada 89710

Dear Mr. Ricci:

During our 25-year history, The Anaconda Company has been fully aware of its responsibility to maintain a suitable environment for its employees within the mining and beneficating operations as well as for those who work and reside in the vicinity of the mine. We believe we have fulfilled these responsibilities, having received only a few notices of temporary non-compliance with adopted standards within the operation. Also, our contribution to degradation of the environment generally has occurred during times of extreme storm conditions when the entire desert was changing location.

We also know our responsibilities to maintain a suitable environment after the mining operations terminate on June 30, 1978. In addition to stabilizing areas known to threaten clean air requirements and the anticipated standards under the Clean Water Acts, we are diligently searching for methods to convert what remains of a successful mining operation to continuing purposes beneficial to the residents of Mason Valley and beyond.

There are five areas of major concern that relate directly to the environment: the open pit; the waste dumps south of the open pit; the oxide tailings dumps; the concentrator tailings ponds; and the solution evaporation ponds. A discussion of each area, the problems each presents and the actions we are taking follows.

### OPEN PIT

The Yerington Mine is 6,400 feet long and 2,800 feet wide at the rim. It is 800 feet deep at the west end and 225 feet deep in the extreme east end. Approximately 360 million tons of rock and gravel have been removed.

During the 26 years of operations, it was necessary to pump water from the pit area to depress the water table Mr. Hugh Ricci

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## OPEN PIT (Continued)

below the advancing mining activities. Essentially, all of the water pumped was used for townsite supply and to process the ore. The average pumping rate was approximately 3,400 acre feet per year.

Termination of mining and pumping will allow this flow to accumulate in the excavation, probably until it reaches the original ground water elevation of 4,375 feet, approximately 10 feet below the elevation of the stream bed of the Walker River. We have every reason to believe that the water contained in the open pit will meet water quality standards for irrigation and/or recreational purposes. We are confident that the soluble salts content will not increase with exposure to the pit walls or residues of the mining operations.

The Anaconda Company has proposed that the Walker River Irrigation District establish the open pit as a reservoir for use in their irrigation system. To facilitate the proposal, Anaconda will transfer ownership of the land occupied by the pit to WRID, without charge, and will participate financially to divert flood waters from the Walker River. When filled to river level, the reservoir will contain 76,000 acre feet of water. The top 50 feet would offer about 13,500 acre feet of additional storage in normal years and much more during years of drought.

The use of flood waters to accelerate filling the pit would offer use of the reservoir many years prior to filling from natural flow. We believe that this will be a great advantage to the water users as well as a recreational facility that will surely evolve.

#### SOUTH WASTE DUMPS

Waste dumps south of the open pit contain most of the 90 million tons of alluvial gravel that was removed from atop the orebodies, in addition to 25 million tons of rock waste that occurred with the ore.

Because most of the gravel was removed early in the operation, the surfaces of that material still exposed have become stabilized with either natural growth, or a natural crusting that has occurred. Through continual observation and testing in recent years, the surfaces that contributed a dust hazard to the atmosphere during storms have been faced with rock to eliminate the hazard. During two recent wind storms, dust blowing from the dumps was not visible.

The waste dumps have been "top dumped" to minimize erosion of the top and sides of the dumps. This entails dumping

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# SOUTH WASTE DUMPS (Continued)

65-ton loads of material adjacent to each other to create a multitude of craters that will contain a great volume of storm water. In addition, trenches and dams have been constructed to direct all run-off from the dumps into the open pit. This minimizes flash flood dangers to the State highway, the Walker River and surrounding property.

For many years, the State, County, City and individuals have been allowed to remove material from these waste dumps. The rock and gravel have been used for many beneficial purposes: State highway construction; County road construction and repair; land fill for public and private buildings; rip-rap for the Walker River, irrigation and drainage canals; decorative rocks; mineral specimens; etc. There has never been a charge for the material.

Anaconda has suggested that Lyon County establish a sanitary land fill operation using the dump material. This would replace the present garbage disposal area that has been a difficult problem for Yerington and the County. It would be a new use for the material that would be important to Mason Valley.

To preserve all of these beneficial purposes, Anaconda proposed that Lyon County acquire the land occupied by the dumps that is now held as unpatented lode claims.

# OXIDE TAILINGS DUMPS

The oxide tailings dumps, north of the Plant site, contain the crushed rock remaining after extracting the copper in the vat leaching operation. The dumps are completely stable and have no potential for causing pollution.

The top surfaces have been "top dumped" and channeled to prevent storm run-off and erosion of the dumps.

This material has also had wide usage in Mason Valley as a surfacing material for highway shoulders, County and private roads, driveways, yards, etc. because of its stable nature. We have furnished the tailings free of charge to all users.

## CONCENTRATOR TAILINGS

The waste material from our concentrator operation is rock that has been ground to less than 65-mesh and deposited approximately 40 feet deep over an area of, about 600 acres. When this material is dry and exposed to wind, it generates an extreme dust hazard. But the hazard is being completely eliminated by covering the entire surface from two to five feet with compacted oxide tailings.

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# CONCENTRATOR TAILINGS (Continued)

By June 30, 1978 when operations cease, about 95% of the surface will be covered. The remaining 5% is too unstable to cover now because it is made up entirely of very fine material and still contains about 40% moisture. However, after drying through the summer months, it should be sufficiently dry and crusted to support equipment necessary to complete the project --- and we will complete it.

# SOLUTION EVAPORATION PONDS

Discard solutions from the vat leaching operations have been disposed of by solar evaporation in ponds that cover approximately 300 acres. The bottoms of the ponds were  $\sim 10^{10}$  sealed by compaction of a clay surface or application of asphalt to a prepared surface. Constant monitoring of the quality of the ground waters and continuous use of water from wells in the immediate vicinity in our townsite and process systems over the 25 years indicates little or no migration of the low pH, high salts solutions from the ponding area.

When the area completely dries, several thousand tons of salts rich in iron sulfates will remain. The residue will not produce an airborne dust problem because it dries with an extremely tough crust. The crust is an artificial jarosite that is only slightly soluble in water.  $K = \frac{50}{\sqrt{2}} \frac{(56)}{\sqrt{2}}$ 

Because the salts may have economic value as a soil conditioner, and will offer a minimal threat to clean air and water standards, we will delay any action to alter the area. In the meantime, we will research the marketability of the residue and, of course, closely monitor any threat the area may have to the environment.

The Burns International Security Services, Inc. has been engaged to guard the entire project to protect the public from harm and the Company from damage.

We have recently made application to the BLM to gain title to the land occupied by the townsite of Weed Heights. When the application is approved, we will attempt to dispose of the housing area to parties interested in offering its use in whole or part toward attracting new business to Mason Valley. Also, as soon as disposal of mining machinery and equipment is complete, the Plant site may be a desirable area for development of light industry.

We have great desire to have closure of the Yerington Mine offer the least possible negative environmental, economic or social

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impact on the community. We are working diligently to realize that desire.

Please contact me if you have any questions.

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Yours very truly, NESBIT в. General Manager

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