

OFFICE MEMORANDUM

TO: Lawrence W. Batty ^{LWB}
Darrell J. Smith ^{DJ}
Louis A. Beck

FROM: Edward S. Armstrong

SUBJECT: New Idria Mine, San Benito County -- Complaint Investigation

On 1 April 1975, Larry Batty and I inspected the New Idria Mine site and surrounding territory in response to a complaint. The owner of the ranch approximately 1½ miles downstream from the mine site claimed runoff from the mine was degrading the creek to the point that he was afraid to let his cattle drink the water.

It was immediately apparent that runoff from the mine area was affecting San Carlos Creek. There was an easily visible color change and chemical reaction occurring at the point the runoff entered the creek. The drainage water on the mine site was obviously highly mineralized and had deposited deep beds of precipitates even before entering San Carlos Creek. Most of the runoff is seepage coming out the main mine portal but some natural drainage courses trickle through mine tailings before combining with the seepage from the portal.

At the time of inspection, the water draining from the mine area made up approximately one quarter of the total volume of water flowing in San Carlos Creek below mine property. It is anticipated that the proportion of the flow from the mine to the creek will increase during the drier months of the year.

We had not anticipated the extent of the problem and did not have enough containers to collect samples from enough separate sites to make an evaluation. I returned to the mine area on 8 April 1975 and collected samples from six sites as described below and shown on the accompanying map:

- Sample Site #1: A small stream just to the north of main mine portal. Photo No. 1.
- Sample Site #2: Stream of water flowing from main mine portal. Photo No. 2.
- Sample Site #3: San Carlos Creek just upstream from confluence with runoff from mine area. Photo No. 3.
- Sample Site #4: Runoff from mine area just prior to entering San Carlos Creek. This is a combination of water from sites 1 and 2. Photo No. 3.

Sample Site #5: San Carlos Creek at fork on "White" Ranch, approximately 1-3/4 miles downstream from point of entrance of mine runoff. Photo No. 4.

Sample Site #6: East Fork San Carlos Creek just upstream from confluence with San Carlos Creek. Photo No. 5.

Two grab samples were taken at each site. One sample from each site was fixed with nitric acid while the other samples were left raw. The fixed samples were further split and potassium permanganate added to the smaller portions. The samples were sent to the Department of Water Resources Laboratory in Bryte for analysis. The following is the result of the analyses.

Constituent	Site #1	Site #2	Site #3	Site #4	Site #5	Site #6
Hardness mg/l	3160	3200	724	2900	1350	588
Calcium mg/l	397	296	5.4	283	120	24
Magnesium mg/l	527	598	172	533	255	128
pH	4.5	2.7	8.5	2.8	7.7	8.4
Sulfate mg/l	3420	7990	186	6400	1350	263
Specific Conductance umhos	4320	8560	1170	7380	2400	1250
Arsenic mg/l	0.0	0.05	0.0	0.02	0.02	0.0
Cadmium mg/l	0.01	0.0	0.0	0.0	0.0	0.0
Chromium mg/l	0.02	0.0	0.08	0.01	0.17	0.0
Copper mg/l	0.28	0.58	0.02	0.45	0.11	0.0
Iron mg/l	0.64	12.0	7.4	9.7	9.6	0.12
Lead mg/l	0.01	0.01	0.01	0.01	0.02	0.01
Mercury mg/l	0.0002	0.0023	0.0027	0.0040	0.0078	0.0000
Aluminum mg/l	45.0	226.0	4.3	248.0	74.0	0.4

The quality of the natural runoff waters (Sites 3 and 6) is acceptable for livestock use. The quality of water from the mine (Sites 1, 2 and 4) and San Carlos Creek at the White Ranch (Site 5) is not within levels recommended for livestock use by the EPA in the publication entitled, "Water Quality Criteria 1972".

The quality of natural water is marginal for irrigation use and unsatisfactory for domestic use. Mine runoff water is unacceptable for either use.

Mr. White possesses a license for diversion and use of water (Permit #4381) to divert 0.2 C.F.S. from San Carlos Creek for irrigation and domestic purposes.

Conclusions:


1. The New Idria Mining and Chemical Company is in violation of Resolution No. 70-205 which states:

"The waste discharge shall not cause a pollution of ground or surface waters."

2. Mr. White's license to divert water from San Carlos Creek for a domestic use is precluded by the natural background quality of the waters. The irrigation and stockwatering use has been damaged by the mine runoff.

Recommendations:

The New Idria Mining and Chemical Company should try to find a method to contain the runoff on mine property.



ESA/ic
06/02/75

