



CHEMTECH

ANALYTICAL LABORATORY

6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 12-08-93

TO: Co-op Mining
P.O. Box 1245
Huntington, Utah 84528

PROJECT: Sediment Pond "A"

DATE SAMPLED: 10-26-93

DATE SUBMITTED: 10-27-93

CERTIFICATE OF ANALYSIS

SAMPLE ID: LAB#: <u>PARAMETER</u>	001 <u>U101392</u>	002 <u>U101393</u>	<u>DATE</u> <u>ANALYZED</u>
✓ pH Units	7.72	8.04	11-11-93
✓ Conductivity, uhmos/cm	478	498	11-11-93
✓ % Saturation	70.7	43.8	11-04-93
✓ Sieve % Rock	36.4	22.4	11-01-93
% Sand	46.7	64.4	11-01-93
% Silt/Clay	16.9	13.2	11-01-93
✓ SAR	2.17	2.34	--
Water Sol. Calcium as Ca, mg/Kg	237	187	11-12-93
Water Sol. Magnesium as Mg, mg/Kg	54.0	31.3	11-12-93
Water Sol. Sodium as Na, mg/Kg	142	131	11-12-93
Water Sol. TKN, mg/Kg	9,900	9,330	11-08-93
Water Sol. Nitrate as NO ₃ -N, mg/Kg	3.27	3.71	12-04-93
Maximum Acid Potential, tons CaCO ₃ /1000 tons soil	10.1	6.87	11-16-93
Neutralization Potential, tons CaCO ₃ /1000 tons soil	49.6	11.1	11-16-93
Acid Base Potential, tons CaCO ₃ /1000 tons soil	39.5	4.23	11-16-93
✓ % TOC	>32	>21	11-03-93
% Available Water Capacity	52.3	38.9	11-04-93
✓ Selenium as Se, mg/Kg	<4	<4	11-12-93
✓ Boron as B, mg/Kg	93.6	94.2	11-12-93
% Sulfur	0.323	0.220	11-02-93

NOTE: Sample temp. when submitted was 18.7°C not on ice.

Joel Workman

Mangum Engineering Consultants
388 East Boynton Road
Kaysville, Utah 84037

Co-Op Mining Company
P.O. Box 1245
Huntington, Utah 84528

To Whom It May Concern,

I, Charles Reynolds, hereby certify that I have inspected and observed the placement of the sediment material which has been removed from Pond "A". Material has been placed in the approved storage area in accordance with Appendix 3-K of the Bear Canyon MRP (ACT/015/025). I certify that the fill material is stable.

Charles Reynolds

12/14/93