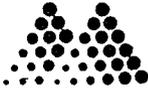


0037



## Mountain States Analytical, Inc.

*The Quality Solution*

Earthfax Engineering, Inc.  
7324 So. Union Park Ave.  
Suite 100  
Midvale, UT 84047

Attn: Mr. Vicki Bailey  
Project: Horizon Mining, LLC

MSAI Sample: 77994  
MSAI Group: 21877  
Date Reported: 04/21/98

Discard Date: 05/21/98  
Date Submitted: 04/13/98  
Date Sampled: 04/11/98  
Collected by:  
Purchase Order:  
Project No.:

Sample ID: Roof-In-Mine (Diss.)  
Matrix: Waste Water

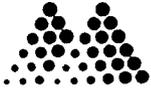
Test	Analysis	Results as Received	Units	Limit of Quantitation
0009	Cation/Anion Balance Calculation Method: ASTM D-596-83			
	Cations	7.9	meq/l	0.5
	Anions	6.4	meq/l	0.5
0392I	Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	Batch. w214		
13001	Metals by ICP, 6010A, w/ww Method: SW-846 6010A			
	Manganese	0.026	mg/l	0.015
CATIO	Cations-Mg,Ca,K,Na,Fe Method: ASTM D-596-83			
	Magnesium	33.0	mg/l	0.100
	Calcium	87.7	mg/l	0.800
	Potassium	6.80	mg/l	1.000
	Sodium	14.9	mg/l	1.50
	Iron	U	mg/l	0.500
0008	Anion Scan by Ion Chromatography Method: EPA 300.0			
	Fluoride	0.16 B	mg/l	1
	Chloride	6.9	mg/l	3
	Bromide	U	mg/l	0.4
	Nitrate Nitrogen	0.31	mg/l	0.2
	Sulfate	71.3	mg/l	10
	Nitrite Nitrogen	U	mg/l	0.2
	Orthophosphate phosphorus	U	mg/l	1
0201	Alkalinity as CaCO <sub>3</sub> , ww, 310.1 Method: EPA 310.1			
	Bicarbonate	236	mg/l	5

10  
Years of  
Quality  
Service

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## Mountain States Analytical, Inc.

Earthfax Engineering, Inc.

The Quality Solution

Page 2

MSAI Sample: 77994

MSAI Group: 21877

Sample ID: Roof-In-Mine (Diss.)

Test	Analysis	Results as Received	Units	Limit of Quantitation
0201	Alkalinity as CaCO <sub>3</sub> , ww, 310.1 Method: EPA 310.1			
	Carbonate	U	mg/l	5
	Hydroxide	U	mg/l	5
	Total alkalinity	236	mg/l	5
0939	Sample Filtering, ww, MSAI Method: IN HOUSE MSAI	Complete		

- U - Not detected at the Method Detection Limit.
- J - Compound Detected below the Limit of Quantitation.
- B - Detected, below limit of quantitation but above the method detection limit.

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,  
Reviewed and Approved by:

Mark W. Bostrom  
Project Manager

10  
Years of  
Quality  
Service

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