

UNC MINING AND MILLING

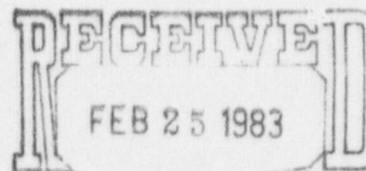


Division of United Nuclear Corporation
A **UNC RESOURCES** Company

Church Rock Operations
P.O. Drawer QQ

Gallup, New Mexico 87301
Telephone 505/722-6651

February 23, 1983



RECEIVED

FEB 25 1983

EID Dir's Office

Mr. Russell Rhoades, Director **RADIATION PROTECTION BUREAU**
N.M. Environmental Improvement Division
P.O. Box 968
Santa Fe, NM 87504

Re: Tailings Neutralization Semi-Monthly Report

Dear Mr. Rhoades:

In compliance with UNC's reporting proposal, the following documents are forwarded for the semi-monthly period from 2-6-83 through 2-19-83.

1. Semi-weekly pH monitoring of neutralized tailings fluids and slurries.
2. Laboratory analysis data of the pond fluid samples.

Respectfully submitted,

Marshall J. Fletcher
Resident Engineer

MJF/v

Enclosures

cc: T. M. Hill, UNC, Manager of Environmental Affairs
G. A. Swanquist, UNC, General Manager of Milling & IX
G. K. Billings, Billings & Associates

PH MONITORING DATA

Location of pH Measurement Points	FIELD pH DATA									
	Date	pH	Date	pH	Date	pH	Date	pH	Date	pH
B.P. #1 Neut. Chamber Discharge	2-13-83	-	2-14-83	-	2-15-83	-	2-16-83	-	2-17-83	-
Borrow Pit No. 1 SE Corner				4.57				4.57		
Borrow Pit No. 2 Barge Station			2-14-83	4.04				4.54	2-17-83	
North Pond Decant Station			2-14-83	5.05				5.22	2-17-83	
Pumping Well No. 323-A			2-14-83	2.60				2.53	2-17-83	

REMARKS: The pH for the north pond decant station appears to be a very small area localized at this point where melting snow is draining from the beach sand into the pond. Pumping to recycle the north pond liquid was started 2-17-83. Samples taken at other points in the pond had pH readings of 8.25, 8.64 and 8.88. A sample taken by the pump intake on 2-18-83 had a pH of 7.79.

pH MONITORING DATA

Location of pH Measurement Points	FIELD pH DATA													
	Date	pH	Date	pH	Date	pH	Date	pH	Date	pH	Date	pH		
B.P. #1 Neut. Chamber Discharge	2-6-83	-	2-7-83	-	2-8-83	-	2-9-83	-	2-10-83	-	2-11-83	-	2-12-83	-
Borrow Pit No. 1 SE Corner					4.50					4.54				
Borrow Pit No. 2 Barge Station			2-7-83	4.06					2-10-83	4.21				
North Pond Decant Station			2-7-83	8.25					2-10-83	7.16				
Pumping Well No. 323-A			2-7-83	2.50					2-10-83	2.54				

REMARKS:

pH 7.91 Temp. _____ Gross α _____
TDS 4,969 Cond. 6300 Gross β _____
TSS _____ Sal. _____

LAB NO. W-1295
SAMPLE ID North Pond
COLL. DATE 2-9-83
COLL. TIME 0915
SAMPLER mm

TOTAL ANALYSES

Aliquot _____
Filter dig. acids _____
Parameters _____

AA METALS

Filtered _____
HNO₃ to pH 2 _____
Aluminum 0.412
Antimony _____
Arsenic _____
Barium _____
Cadmium _____
Calcium 289.5
Chromium _____
Cobalt _____
Copper _____
Iron 0.054
Lead 0.0106
Magnesium 116.5
Manganese 3.5
Molybdenum 0.0130
Mercury _____
Nickel _____
Potassium _____
Selenium _____
Silver _____
Sodium _____
Vanadium _____
Zinc _____

SELECTIVE ION

Nitrate-N 4.59
Ammonia-N 938
Cyanide _____
Fluoride _____

GRAVIMETRIC or TITRIMETRIC

Chloride 83.47
Carbonate _____
Bicarbonate 219.37
Alkalinity _____
Sulfate 34.22

REMARKS

Field Data
pH 8.27
Cond. 4900
Temp. 25°C

COLORIMETRIC

Boron _____
Uranium _____
Phenols _____

WORK SENT OUT

Aliquot _____
Where _____
For _____

RADIOMETRIC pCi/L

Thorium-230 _____
Radium-226 _____
Lead-210 _____
Polonium-210 _____
Radium-228 _____

All results are reported in
mg/L unless otherwise noted.

Radiometric results are
reported in pCi/L

OTHER

pH 4.09 Temp. Gross α
 TDS 6,014 Cond. 6800 Gross β
 TSS Sal.

LAB NO. W-1296
 SAMPLE ID Borrow Pit #2
 COLL. DATE 2-9-83
 COLL. TIME 0934
 SAMPLER mm

TOTAL ANALYSES

Aliquot
 Filter dig. acids
Parameters

AA METALS

Filtered
 HNO₃ to pH 2
 Aluminum 24.51
 Antimony
 Arsenic
 Barium
 Cadmium
 Calcium 333
 Chromium
 Cobalt
 Copper
 Iron 7.0
 Lead 0.0133
 Magnesium 123.5
 Manganese 16.0
 Molybdenum 0.0029
 Mercury
 Nickel
 Potassium
 Selenium
 Silver
 Sodium
 Vanadium
 Zinc

SELECTIVE ION

Nitrate-N 2.18
 Ammonia-N 95.4
 Cyanide
 Fluoride

REMARKS

Field Data
 PH 4.28
 Cond. 5200
 Temp. 24°C

GRAVIMETRIC or TITRIMETRIC

Chloride 126.66
 Carbonate
 Bicarbonate 0
 Alkalinity
 Sulfate 4.107

COLORIMETRIC

Boron
 Uranium
 Phenols

WORK SENT OUT

Aliquot
 Where
 For

All results are reported in mg/L unless otherwise noted.

Radiometric results are reported in pCi/L

OTHER

RADIOMETRIC pCi/L

Thorium-230
 Radium-226
 Lead-210
 Polonium-210
 Radium-228