

UNITED NUCLEAR CORPORATION



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CERTIFIED -RETURN RECIEPT REQUESTED

August 29, 2001

Dwight Chamberlain, Chief
US Nuclear Regulatory Commission, Region IV
Division of Radiation Safety and Safeguards
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-4351

Re: Semi-Annual Effluent and Environmental Monitoring
Reports from January to June, 2001

Dear Mr. Chamberlain:

In compliance with our Nuclear Regulatory Materials License No. SUA-1475, Amendment No. 30, conditions No. 12 and 30; the attached Effluent and Environmental Monitoring Reports are described and presented as listed below. This applicable and available data will specify the concentration of each principal radionuclide released to unrestricted areas in water effluent during the period of January 01, 2001 through June 30, 2001. This data is also reported on the format required in Regulatory Guide 4.14.


Available monitoring data in this report are in the order listed below:

- Environmental Inspection Reports (continued this procedure to show and maintain the integrity of the restricted tailings area).
- Ground Water Results (available data on GW-3 well).
- Sample Location Maps

Presently our environmental monitoring program is at greatly reduced level and the above reported items are solely based on available data only. The required radiation monitoring program will be under an RWP (radiation Work Permit) and no RWP was issued during this semi-annual period.

Additionally, our active radiation monitoring instruments are routinely Calibrated and the radiation monitoring program is still in effect, but is in standby status awaiting the final pond closure reclamation activity.

Sincerely,



Max Chischilly, Jr.
Radiation Safety Officer

Cc: Ken Hooks, NRC
Steve Cline, GE
Roy Blickwedel, GE

ENVIRONMENTAL INSPECTION REPORTS

ENVIRONMENTAL INSPECTION

DATE: 1-11-01

TIME START: 1005

INSPECTOR: Max Chinchilly Jr.

TIME END: 1100

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>- NA</u>	<u> </u>	<u>ONLY UNDER AN RWP.</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: Other important note: As of 1/8, all extraction well pumping activity has ceased for an indefinite period and all electrical power to the tailings area is switched off on 1/10 @ 1300.

ENVIRONMENTAL INSPECTION

DATE: 2-26-01

TIME START: 0920

INSPECTOR: Max Chischilly J.

TIME END: 1110

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>- NA</u>	<u>-</u>	<u>ONLY UNDER AN RWP IF NEEDED</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: _____

ENVIRONMENTAL INSPECTION

DATE: 3-16-01

TIME START: 0950

INSPECTOR: Max Clusckilly Jr.

TIME END: 1125

TAILINGS AREA:

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>- NA</u>	<u>-</u>	<u>ONLY UNDER AN RWP IF NEEDED</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: _____

ENVIRONMENTAL INSPECTION

DATE: 4-27-01

TIME START: 1050

INSPECTOR: Max Chischilly Jr.

TIME END: 1200

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u>See below</u>
2. Air Monitors	<u>- NA -</u>	<u> </u>	<u>only under an RWP when needed</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: Chased 4 cows out of the south end area on
4/23 @ 1400 and informed the maintenance worker on the
location of entry. On 4/24/01, additional fencework was
done to reinforce existing fence line at the south end,
bottom of ditch area to prevent further cattle entry.

ENVIRONMENTAL INSPECTION

DATE: 5-21-01

TIME START: 1035

INSPECTOR: Max Chischilly Jr.

TIME END: 1143

TAILINGS AREA:

	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>- NA -</u>	<u> </u>	<u>only under an RWP when needed.</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: _____

ENVIRONMENTAL INSPECTION

DATE: 6-26-01

TIME START: 1430

INSPECTOR: Max Chuschilly Jr.

TIME END: 1515

TAILINGS AREA:

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>-</u>	<u>NA</u>	<u>ONLY UNDER AN RWP WHEN NEEDED</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: _____

GROUNDWATER RESULTS

QUARTERLY LIQUID SAMPLES

<u>Date/Qr.</u>	<u>Location</u>	<u>Type</u>	<u>Radionuclide</u>	<u>Concentration</u>		<u>Error Est.</u> <u>uci/ml</u>	<u>LLD</u> <u>uci/ml</u>
				<u>Mg/l</u>	<u>uci/ml</u>		
<u>01/09/01</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total	<u>0.056</u>	<u>3.79E-08</u>		<u>2.00E-10</u>
<u>1st-Qr.</u>		<u>Water Well</u>	Th-230 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
			Ra-266 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
UNC Field Data:	PH (STD. Units) = 6.82 Cond. (μ MHOS) = 5,200 Water Depth (Ft.) = 52.0 Temp. ($^{\circ}$ C) = 9.0		Pb-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>
			Po-210 (dissolved) or total				<u>1.00E-09</u>

COMMENTS:

QUARTERLY LIQUID SAMPLES

<u>Date/Qr.</u>	<u>Location</u>	<u>Type</u>	<u>Radionuclide</u>	<u>Concentration</u>		<u>Error Est.</u> <u>uci/ml</u>	<u>LLD</u> <u>uci/ml</u>
				<u>Mg/l</u>	<u>uci/ml</u>		
<u>04/10/01</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total	<u>0.0057</u>	<u>3.86E-09</u>		<u>2.00E-10</u>
<u>2nd-Qr.</u>		<u>Water Well</u>	Th-230 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
			Ra-266 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
			Pb-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>
			Po-210 (dissolved) or total				<u>1.00E-09</u>

UNC Field Data: PH (STD. Units) = 7.26
 Cond. (μ MHOS) = 4,910
 Water Depth (Ft.) = 50.95
 Temp. (°C) = 11.4

COMMENTS:

QUARTERLY LIQUID SAMPLES

<u>Date/Qr.</u>	<u>Location</u>	<u>Type</u>	<u>Radionuclide</u>	<u>Concentration</u>		<u>Error Est.</u> <u>uci/ml</u>	<u>LLD</u> <u>uci/ml</u>
				<u>Mg/l</u>	<u>uci/ml</u>		
<u>02/06/01</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total	<u>0.0590</u>	<u>3.99E-08</u>		<u>2.00E-10</u>
<u>1st-Qr.</u>		<u>Water Well</u>	Th-230 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
<u>(Monthly Sample)</u>			Ra-266 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
UNC Field Data:	PH (STD. Units) = 6.99		Pb-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>
	Cond. (µ MHOS) = 5,020		Po-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>
	Water Depth (Ft.) = 51.7						
	Temp. (°C) = 13.7						

COMMENTS:

QUARTERLY LIQUID SAMPLES

<u>Date/Qr.</u>	<u>Location</u>	<u>Type</u>	<u>Radionuclide</u>	<u>Concentration</u>		<u>Error Est.</u> <u>uci/ml</u>	<u>LLD</u> <u>uci/ml</u>
				<u>Mg/l</u>	<u>uci/ml</u>		
<u>03/06/01</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total	<u>0.0569</u>	<u>3.85E-08</u>		<u>2.00E-10</u>
<u>1st-Qr.</u>		<u>Water Well</u>	Th-230 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
<u>(Monthly Sample)</u>			Ra-266 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
UNC Field Data:	PH (STD. Units) = 7.0		Pb-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>
	Cond. (µ MHOS) = 4,840		Po-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>
	Water Depth (Ft.) = 51.3						
	Temp. (°C) = 12.9						

COMMENTS:

QUARTERLY LIQUID SAMPLES

<u>Date/Qr.</u>	<u>Location</u>	<u>Type</u>	<u>Radionuclide</u>	<u>Concentration</u>		<u>Error Est.</u>	<u>LLD</u>
				<u>Mg/l</u>	<u>uci/ml</u>		
<u>05/08/01</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total	<u>0.0600</u>	<u>4.06E-08</u>		<u>2.00E-10</u>
<u>2nd-Qr.</u>		<u>Water Well</u>	Th-230 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
<u>(Monthly Sample)</u>			Ra-266 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
UNC Field Data:	PH (STD. Units) = 6.72 Cond. (µ MHOS) = 5,070 Water Depth (Ft.) = 50.9 Temp. (°C) = 14.6		Pb-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>
			Po-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>

COMMENTS:

QUARTERLY LIQUID SAMPLES

<u>Date/Qr.</u>	<u>Location</u>	<u>Type</u>	<u>Radionuclide</u>	<u>Concentration</u>		<u>Error Est.</u> <u>uci/ml</u>	<u>LLD</u> <u>uci/ml</u>
				<u>Mg/l</u>	<u>uci/ml</u>		
<u>06/05/01</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total	<u>0.058</u>	<u>3.93E-08</u>		<u>2.00E-10</u>
<u>2nd-Qr.</u>		<u>Water Well</u>	Th-230 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
<u>(Monthly Sample)</u>			Ra-266 (dissolved) or total		<u><2.00E-10</u>		<u>2.00E-10</u>
			Pb-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>
			Po-210 (dissolved) or total		<u><1.00E-09</u>		<u>1.00E-09</u>

UNC Field Data: PH (STD. Units) = 6.76
 Cond. (µ MHOS) = 4,960
 Water Depth (Ft.) = 50.7
 Temp. (°C) = 15.8

COMMENTS:



ENERGY LABORATORIES, INC.

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**UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS**

WELL ID:
LABORATORY ID:
SAMPLE DATE/TIME:
DATE RECEIVED:
REPORT DATE:
QUARTER REPRESENTED:
UNC SUBMITTAL #:

GW-3	GW-3	GW-3	GW-3
00-34507-7	00-36828-7	01-30299-10	01-32151-6
07/17/2000 14:15	10/10/2000 08:50	01/09/2001 09:35	04/10/2001 09:55
07/20/2000 10:00	10/13/2000 00:00	01/12/2001 10:20	04/13/2001 10:00
August 21, 2000	November 20, 2000	February 12, 2001	May 15, 2001
Third 2000	Fourth 2000	First 2001	Second 2001
TE-7-7-2000	TE-9-10-2000	TE-1-1-2001	TE-7-4-2001

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	809	644	830	945
Magnesium	EPA 200.7	mg/L	0.01	258	210	265	287
Sodium	EPA 200.7	mg/L	0.05	207	179	207	207
Potassium	EPA 200.7	mg/L	0.10	9.1	9.0	8.5	9.1
Bicarbonate	SM 2320-B	mg/L	0.10	1190	1170	1210	1250
Sulfate	EPA 200.7	mg/L	1.0	1710	1320	1850	2070
Chloride	EPA 200.7	mg/L	1.0	125	96.4	125	128
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05	0.10	< 0.05	0.14
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	117	118	115	108

Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4800	4680	4660	4680
pH	SM 4500-H-B	std. units	0.10	7.51	7.60	7.62	7.20

Trace Metals							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	0.01	< 0.01	0.01	0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	1.78	1.57	1.90	0.19
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	0.001	0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Radiometrics							
Uranium	EPA 200.8	mg/L	0.0003	0.056	0.058	0.056	0.0057
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±							
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	1.1	3.6	2.4
Radium Error Estimate ±					0.1	1.2	1.0
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±							
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±							
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	1.3
G. Alpha Error Estimate ±							1.0

Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data			Target Range				
Anion	meq			67.0	57.8	70.1	74.9
Cation	meq			71.3	57.8	72.9	80.4
SM A/C Balance	%	-5 - +5		3.10	-0.02	1.95	3.53
Calc TDS	mg/L			4233	3568	4402	4750
TDS A/C Balance	dec. %	0.80 - 1.20		1.13	1.31	1.06	0.99



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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 REVISED REPORT DATE:
 UNC SUBMITTAL #:

GW-3
01-30835-12
02/06/2001 11:25
02/09/2001 10:45
March 6, 2001
April 30, 2001
TE-1-1-2001

Major Ions	Method	Units	Reporting Limit	Results
Calcium	EPA 200.7	mg/L	0.05	943
Magnesium	EPA 200.7	mg/L	0.01	290
Sodium	EPA 200.7	mg/L	0.05	183
Potassium	EPA 200.7	mg/L	0.10	9.7
Bicarbonate	SM 2320-B	mg/L	0.10	1220
Sulfate	EPA 200.7	mg/L	1.0	2120
Chloride	EPA 200.7	mg/L	1.0	123
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	110

Non-Metals				
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4720
pH	SM 4500-H-B	std. units	0.10	7.12

Trace Metals				
Aluminum	EPA 200.8	mg/L	0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	1.91
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.002
Vanadium	EPA 200.8	mg/L	0.10	< 0.10

Radiometrics				
Uranium	EPA 200.8	mg/L	0.0003	0.0590
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2
Radium Error Estimate ±				
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0
Radium Error Estimate ±				
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2
Thorium Error Estimate ±				
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0
Lead Error Estimate ±				
Polonium 210	RMO-3008 USAEC	pCi/L	1.0	< 1.0
Polonium Error Estimate ±				
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0
G. Alpha Error Estimate ±				

Trace Organics				
Chloroform	EPA 601	µg/L	1.0	< 1.0

Quality Assurance Data			Target Range	
Anion		meq		75.5
Cation		meq		79.6
SM A/C Balance		%	-5 - +5	2.67
Calc TDS		mg/L		4768
TDS A/C Balance		dec. %	0.80 - 1.20	0.99



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UNC MINING AND MILLING: CHURCHROCK OPERATIONS GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 DATE RECEIVED:
 REPORT DATE:
 UNC SUBMITTAL #:

GW-3
01-31400-12
03/06/2001 12:30
03/09/2001 09:45
April 5, 2001
TE-5-3-2001

Major Ions	Method	Units	Reporting Limit	Results
Calcium	EPA 200.7	mg/L	0.05	817
Magnesium	EPA 200.7	mg/L	0.01	263
Sodium	EPA 200.7	mg/L	0.05	164
Potassium	EPA 200.7	mg/L	0.10	9.3
Bicarbonate	SM 2320-B	mg/L	0.10	1180
Sulfate	EPA 200.7	mg/L	1.0	2040
Chloride	EPA 200.7	mg/L	1.0	120
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.16
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	112

Non-Metals				
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4380
pH	SM 4500-H-B	std. units	0.10	7.63

Trace Metals				
Aluminum	EPA 200.8	mg/L	0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	1.87
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10

Radiometrics				
Uranium	EPA 200.8	mg/L	0.0003	0.0569
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2
Radium Error Estimate ±				
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0
Radium Error Estimate ±				
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2
Thorium Error Estimate ±				
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0
Lead Error Estimate ±				
Polonium 210	RMO-3008 USAEC	pCi/L	1.0	< 1.0
Polonium Error Estimate ±				
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0
G. Alpha Error Estimate ±				

Trace Organics				
Chloroform	EPA 601	µg/L	1.0	< 1.0

Quality Assurance Data		Target Range		
Anion	meq			73.2
Cation	meq			70.2
SM A/C Balance	%	-5 - +5		-2.07
Calc TDS	mg/L			4502
TDS A/C Balance	dec. %	0.80 - 1.20		0.97



ENERGY LABORATORIES, INC.

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PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

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LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 RECEIVED DATE/TIME:
 REPORT DATE:
 UNC SUBMITTAL #:

GW-3
01-32762-12
05/08/2001 10:40
05/11/2001 10:00
June 13, 2001
TE-8-5-2001

Major Ions	Method	Units	Reporting Limit	Results
Calcium	EPA 200.7	mg/L	0.05	808
Magnesium	EPA 200.7	mg/L	0.01	256
Sodium	EPA 200.7	mg/L	0.05	195
Potassium	EPA 200.7	mg/L	0.10	8.9
Bicarbonate	SM 2320-B	mg/L	0.10	1250
Sulfate	EPA 200.7	mg/L	1.0	1730
Chloride	EPA 200.7	mg/L	1.0	146
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.15
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	107

Non-Metals				
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4850
pH	SM 4500-H-B	std. units	0.10	7.49

Trace Metals, dissolved				
Aluminum	EPA 200.8	mg/L	0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	1.96
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10

Radiometrics				
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.0600
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2
Radium Error Estimate ±				-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0
Radium Error Estimate ±				-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2
Thorium Error Estimate ±				-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0
Lead Error Estimate ±				-
Polonium 210	RMO-3008 USAEC	pCi/L	1.0	< 1.0
Polonium Error Estimate ±				-
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0
G. Alpha Error Estimate ±				-

Trace Organics				
Chloroform	EPA 601	µg/L	1.0	< 1.0

Quality Assurance Data			Target Range	
Anion		meq		68.3
Cation		meq		70.6
SM A/C Balance		%	-5 - +5	1.63
Calc TDS		mg/L		4245
TDS A/C Balance		dec. %	0.80 - 1.20	1.14



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LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:
 LABORATORY ID:
 SAMPLE DATE/TIME:
 RECEIVED DATE/TIME:
 REPORT DATE:
 UNC SUBMITTAL #:

GW-3
01-33406-12
06/05/2001 12:45
06/08/2001 10:00
July 6, 2001
TE-9-6-2001

Major Ions	Method	Units	Reporting Limit	Results
Calcium	EPA 200.7	mg/L	0.05	847
Magnesium	EPA 200.7	mg/L	0.01	274
Sodium	EPA 200.7	mg/L	0.05	194
Potassium	EPA 200.7	mg/L	0.10	8.60
Bicarbonate	SM 2320-B	mg/L	0.10	1280
Sulfate	EPA 200.7	mg/L	1.0	1940
Chloride	EPA 200.7	mg/L	1.0	136
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.20
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	97.5

Non-Metals				
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4230
pH	SM 4500-H-B	std. units	0.10	7.25

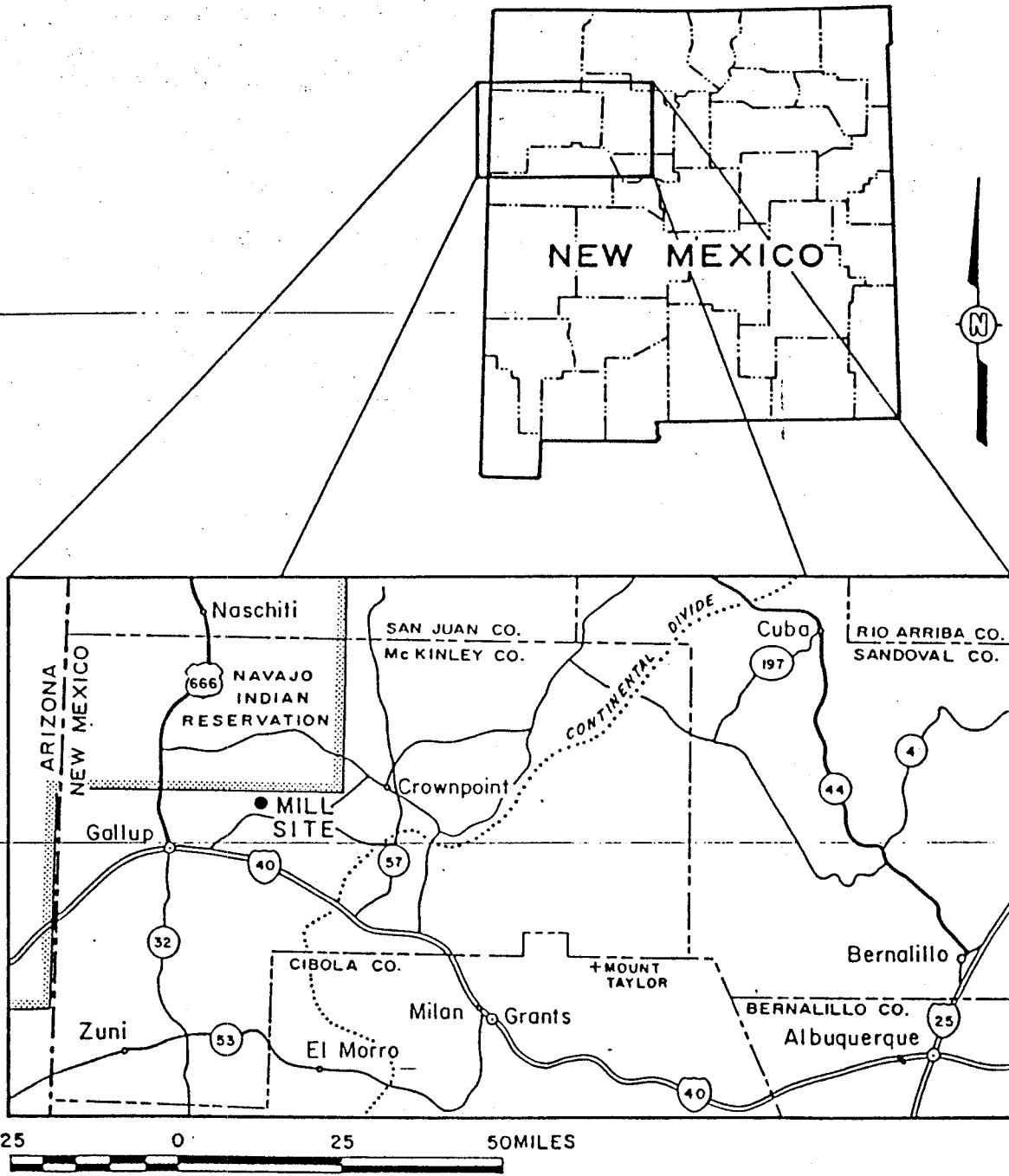
Trace Metals, dissolved				
Aluminum	EPA 200.8	mg/L	0.10	0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	2.06
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	0.005
Vanadium	EPA 200.8	mg/L	0.10	< 0.10

Radiometrics				
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.058
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2
Radium Error Estimate ±				-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0
Radium Error Estimate ±				-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2
Thorium Error Estimate ±				-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0
Lead Error Estimate ±				-
Polonium 210	RMO-3008 USAEC	pCi/L	1.0	< 1.0
Polonium Error Estimate ±				-
Gross Alpha	EPA 900.0	pCi/L	1.0	< 1.0
G. Alpha Error Estimate ±				-

Trace Organics				
Chloroform	EPA 8260	µg/L	1.0	< 1.0

Quality Assurance Data			Target Range	
Anion	meq			72.2
Cation	meq			74.0
SM A/C Balance	%		-5 - +5	1.21
Calc TDS	mg/L			4470
TDS A/C Balance	dec. %		0.80 - 1.20	0.95

SAMPLING LOCATION MAPS



SOURCE:
 URANIUM MILL LICENSE
 RENEWAL APPLICATION-
 ENVIRONMENTAL REPORT.
 LICENSE NO. NM-UNC-ML.
 JNC 1981

SKETCH I-1
 CHURCH ROCK PROJECT
 SITE LOCATION PLAN
 16674-000

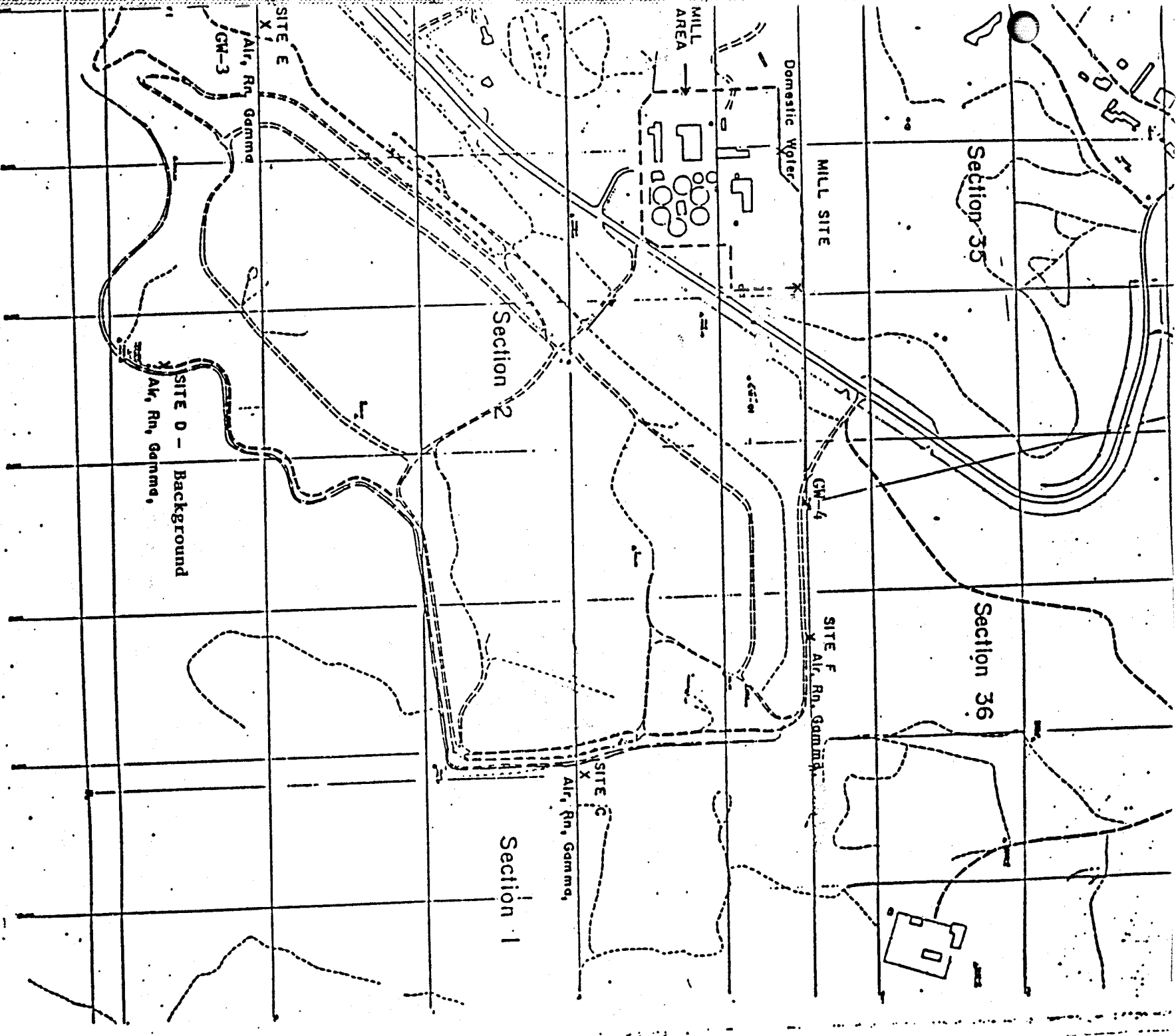
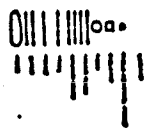


FIGURE 2



UNITED NUCLEAR CORPORATION	100
PLANT ENGINEERING	100
DR. R. STEWART, A19	100
8/19/77	100