UNITED NUCLEAR CORPORATION

P.O. Box 3077
Gallup, New Mexico 87305-3077

Telephone: (505) 722-6651
Fax: (505) 722-6654

FEB 25 2002

CERTIFIED - RETURN RECEIPT REQUESTED

February 19, 2002

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 July to December, 2001

Dear Mr. Chamberlain:

In compliance with our Nuclear Regulatory Materials License No. SUA-1475, Amendment No. 34, conditions No. 12 and 30; the attached Effluent and Environmental Monitoring Report 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 July 01, 2001 through December 31, 2001. The 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 Report (continued this procedure to show and Maintain the integrity of the restricted tailings area).

- Ground Water Results (available data on GW-3 well).

- Samples 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.

Max Chischilly, Jr.
Radiation Safety Officer

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

ENVIRONMENTAL INSPECTION REPORTS

ENVIRONMENTAL INSPECTION

DATE: 7-31-01 TIME START: 1315

INSPECTOR: Mark Chischilly Jr. TIME END: 1420

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

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 8-30-01 TIME START: 1300

INSPECTOR: Max Chischilly Jr. TIME END: 1440

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

ACTION TAKEN: OTHER COMMENT: APPROXIMATELY 80' OF DOWNED OR DAMAGED FENCELINE AND FENCE POST CAUSED BY FLOODING CONDITIONS ON 8-10-01 IS REPAIRED AND REPLACED DURING THE WEEK OF 8-20-01. THIS REPAIRED FENCELINE IS LOCATED AT THE BOTTOM OF THE ARROYO, NEXT TO 2 DRAINAGE CULVERTS AND NEAR THE MAIN NORTH ENTRANCE WAY OF THE RECLAIMED TAILINGS AREA.

ENVIRONMENTAL INSPECTION

DATE: 9-25-01 TIME START: 1350

INSPECTOR: Max Chischilly Jr. TIME END: 1500

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

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 10-22-01 TIME START: 1050

INSPECTOR: Mark Chinchilly Jr. TIME END: 1200

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		
2. Air Monitors	– NA –		ONLY UNDER AN RWP IF NECESSARY
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 11-27-01 TIME START: 1035

INSPECTOR: Max Chadwell Jr. TIME END: 1200

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

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 12-18-01 TIME START: 1100

INSPECTOR: Max Chiselly Jr. TIME END: 1215

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

ACTION TAKEN:

GROUNDWATER RESULTS

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration uci/ml	Error Est. uci/ml	LLD uci/ml
7/10/01	GW-3	Ground	U-Nat (dissolved) or total		4.58E-08		2.00E-10
3rd-Qr.		Water Well	Th-230 (dissolved) or total		<2.00E-10		2.00E-10
(Quar. Sample)			Ra-266 (dissolved) or total		<2.00E-10		2.00E-10
			Pb-210 (dissolved) or total		<1.00E-09		1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:
PH (STD. Units) = 6.87
Cond. (µ MHOS) = 5,070
Water Depth (Ft.) = 50.7
Temp. (°C) = 16.2

COMMENTS:

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration uci/ml	Error Est. uci/ml	LLD uci/ml
8/7/01	GW-3	Ground	U-Nat (dissolved) or total		4.81E-08		2.00E-10
3rd-Qr.		Water Well	Th-230 (dissolved) or total		<2.00E-10		2.00E-10
(Monthly Sample)			Ra-266 (dissolved) or total		4.00E-10	3.00 E-10	2.00E-10
			Pb-210 (dissolved) or total		<1.00 E-09		1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:

PH (STD. Units) =	6.59
Cond. (µ MHOS) =	4,980
Water Depth (Ft.) =	50.68
Temp. (°C) =	14.9

COMMENTS:

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration uci/ml	Error Est. uci/ml	LLD uci/ml
9/11/01	GW-3	Ground	U-Nat (dissolved) or total		4.43E-08		2.00E-10
3rd-Qr.		Water Well	Th-230 (dissolved) or total		<2.00E-10		2.00E-10
(Monthly Sample)			Ra-266 (dissolved) or total		<2.00E-10		2.00E-10
			Pb-210 (dissolved) or total		<1.00E-9		1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:

PH (STD. Units) =	6.65
Cond. (µ MHOS) =	4,880
Water Depth (Ft.) =	50.5
Temp. (°C) =	17.1

COMMENTS:

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration µci/ml	Error Est. µci/ml	LLD µci/ml
10/02/01	GW-3	Ground	U-Nat (dissolved) or total		4.37E-08		2.00E-10
4th-Qr.		Water Well					
			Th-230 (dissolved) or total		< 2.00E-10		2.00E-10
Quartery Sample							
			Ra-266 (dissolved) or total		3.00E-10	2.00E-10	2.00E-10
			Pb-210 (dissolved) or total		< 1.00E-09		1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:
PH (STD. Units) = 6.83
Cond. (µ MHOS) = 4,960
Water Depth (Ft.) = 50.45
Temp. (°C) = 15.1

COMMENTS:

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration µci/ml	Error Est. µci/ml	LLD µci/ml
11/06/01	GW-3	Ground	U-Nat (dissolved) or total		4.28E-08		2.00E-10
Monthly Sample		Water Well					
			Th-230 (dissolved) or total		<2.00E-10		2.00E-10
			Ra-266 (dissolved) or total		4.00E-10	2.00E-10	2.00E-10
			Pb-210 (dissolved) or total		<1.00E-09		1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:
PH (STD. Units) = 6.79
Cond. (µ MHOS) = 4,990
Water Depth (Ft.) = 50.35
Temp. (°C) = 15.9

COMMENTS:

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration µci/ml	Error Est. µci/ml	LLD µci/ml
12/04/01	GW-3	Ground	U-Nat (dissolved) or total		4.92E-08		2.00E-10
Monthly Sample		Water Well	Th-230 (dissolved) or total		< 2.00E-10		2.00E-10
			Ra-266 (dissolved) or total		< 2.00E-10		2.00E-10
			Pb-210 (dissolved) or total		< 1.00E-09		1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:
PH (STD. Units) = 6.95
Cond. (µ MHOS) = 4,910
Water Depth (Ft.) = 50.20
Temp. (°C) = 12.8

COMMENTS:

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
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LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	GW-3	GW-3	GW-3	GW-3
LABORATORY ID:	C01080349-012	C01090400-012	C01110315-013	C01120222-013
SAMPLE DATE/TIME:	08/07/2001 13:10	09/11/2001 11:10	11/06/2001 10:05	12/04/2001 13:00
RECEIVED DATE/TIME:	8/10/2001 10:30	09/14/2001 10:00	11/09/2001 10:00	12/07/2001 10:00
REPORT DATE:	September 26, 2001	October 15, 2001	December 12, 2001	December 29, 2001
UNC SUBMITTAL #:	TE-12-8-2001	TE-14-9-2001	TE-17-11-2001	TE-18-12-2001

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	820	840	886	833
Magnesium	EPA 200.7	mg/L	0.01	270	270	280	260
Sodium	EPA 200.7	mg/L	0.05	210	233	229	201
Potassium	EPA 200.7	mg/L	0.10	9.40	8.9	9.6	8.2
Bicarbonate	SM 2320-B	mg/L	0.10	1390	1400	1420	1440
Sulfate	EPA 200.7	mg/L	1.0	1800	1810	2050	1720
Chloride	EPA 200.7	mg/L	1.0	160	154	173	148
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.11	0.10	0.08	0.11
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	90.5	104	88.0	91.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5010	4980	5020	5020
pH	SM 4500-H-B	std. units	0.10	7.20	7.50	7.60	7.40
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	0.10	0.13	0.10	< 0.10
Arsenic III	SM 3114-B	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	2.00	1.99	1.91	1.93
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-B	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, dissolved	EPA 200.8	mg/L	0.0003	0.0710	0.0655	0.0632	0.0726
Radium 226	EPA 903.0	pCi/L	0.2	0.4	< 0.2	0.4	< 0.2
Radium Error Estimate ±				0.3	-	0.2	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
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	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		71.3	72.4	77.1	70.1
Cation	meq		73.0	75.0	77.9	72.4
SM A/C Balance	%	-5 - +5	1.20	1.73	0.52	1.59
Calc TDS	mg/L		4367	4479	4729	4295
TDS A/C Balance	dec. %	0.80 - 1.20	1.15	1.11	1.06	1.17

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

WELL ID:	GW-3	GW-3	GW-3	GW-3
LABORATORY ID:	01-30299-10	01-32151-6	01-34456-12	C01100228-013
SAMPLE DATE/TIME:	01/09/2001 09:35	04/10/2001 09:55	07/10/2001 10:40	10/02/2001 09:45
DATE/TIME RECEIVED:	01/12/2001 10:20	04/13/2001 10:00	07/13/2001 10:30	10/05/2001 10:00
REPORT DATE:	February 12, 2001	May 15, 2001	August 8, 2001	October 22, 2001
QUARTER REPRESENTED:	First 2001	Second 2001	Third 2001	Fourth 2001
UNC SUBMITTAL #:	TE-1-1-2001	TE-7-4-2001	TE-10-7-2001	TE-15-10-2001

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	830	945	888	810
Magnesium	EPA 200.7	mg/L	1.0	265	287	288	260
Sodium	EPA 200.7	mg/L	1.0	207	207	244	224
Potassium	EPA 200.7	mg/L	1.0	8.5	9.1	9.0	8.5
Bicarbonate	SM 2320-B	mg/L	0.10	1210	1250	1350	1450
Sulfate	EPA 200.7	mg/L	1.0	1850	2070	1880	1950
Chloride	EPA 200.7	mg/L	1.0	125	128	125	169
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05	0.14	0.11	0.15
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	115	108	98.0	92.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4660	4680	4980	5010
pH	SM 4500-H-B	std. units	0.10	7.62	7.20	7.10	7.40
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 200.7	mg/L	0.01	1.90	1.91	2.22	1.78
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	0.0560	0.0570	0.0676	0.0646
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	0.3
Radium Error Estimate ±						-	0.2
Radium 228	EPA 904.0	pCi/L	1.0	3.6	2.4	< 1.0	< 1.0
Radium Error Estimate ±				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	1.3	< 1.0	< 1.0
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		70.1	74.9	71.8	75.7
Cation	meq		72.9	80.5	79.4	72.2
SM A/C Balance	%	-5 - +5	1.95	3.59	4.99	-2.36
Calc TDS	mg/L		4402	4752	4545	4556
TDS A/C Balance	dec. %	0.80 - 1.20	1.06	0.98	1.10	1.10

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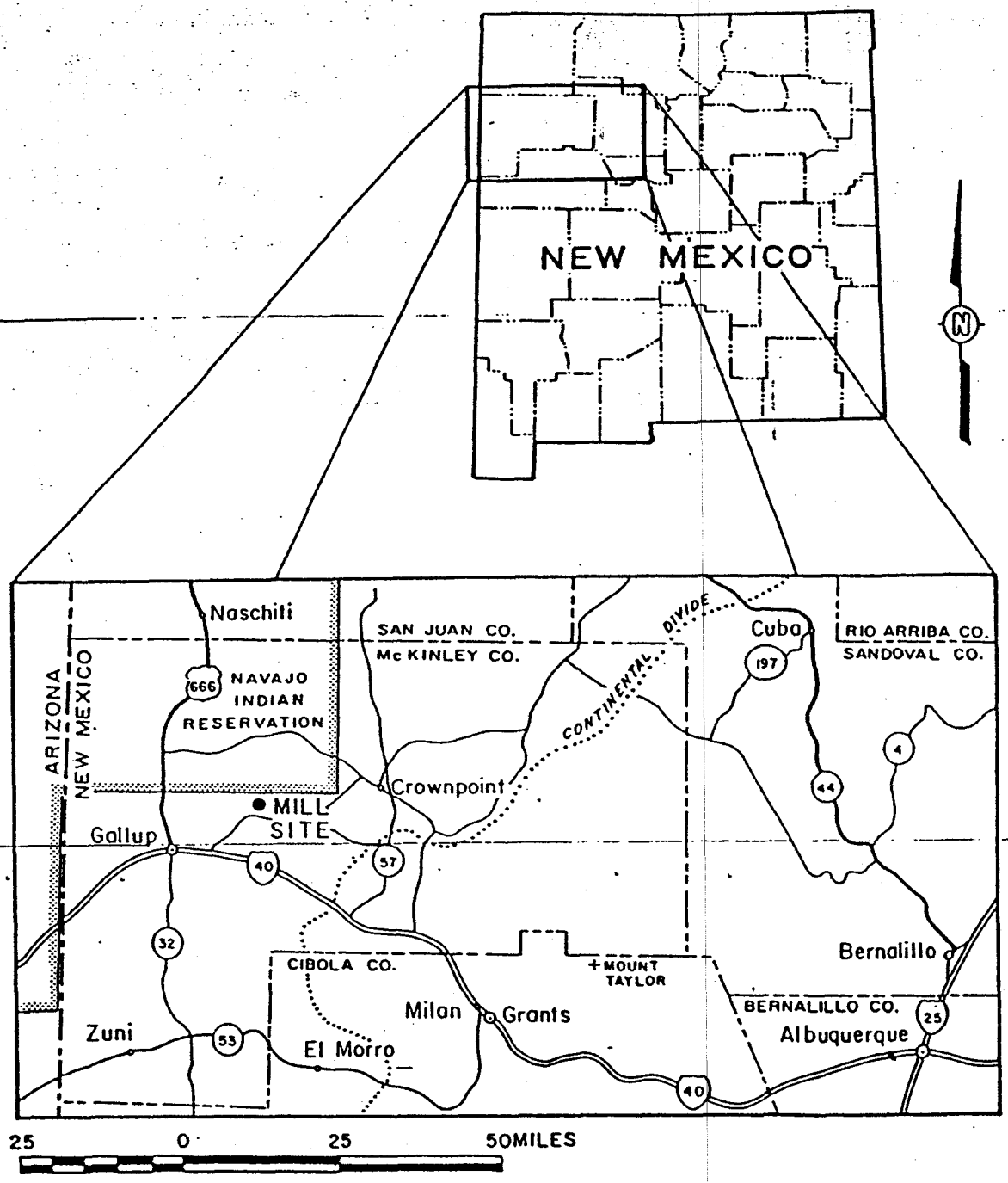
SAMPLING LOCATION MAPS



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

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

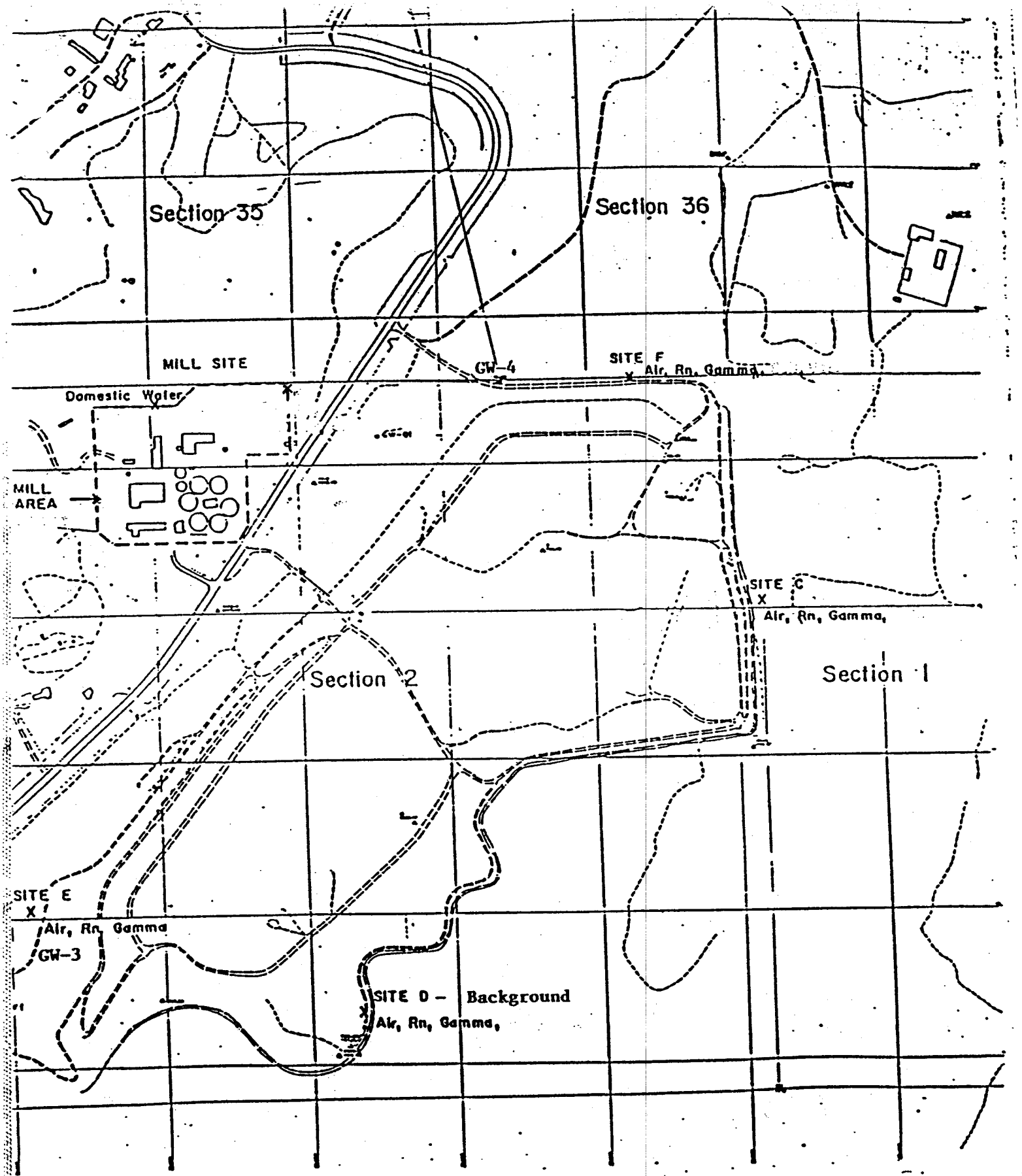
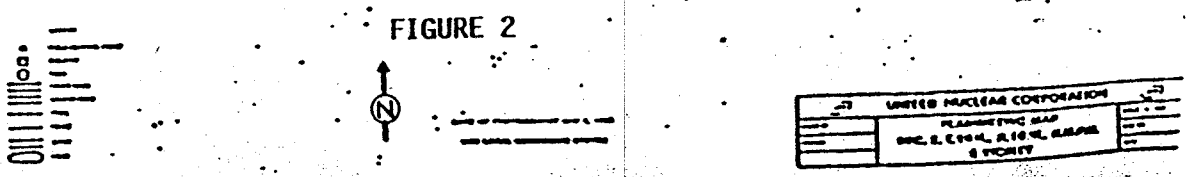

Section 35
Section 36
MILL SITE
GW-4
SITE F
Air, Rn, Gamma,
Domestic Water
MILL AREA
SITE C
Air, Rn, Gamma,
Section 2
Section 1
SITE E
Air, Rn, Gamma
GW-3
SITE D – Background
Air, Rn, Gamma,

FIGURE 2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