

SEMI-ANNUAL EFFLUENT AND
ENVIRONMENTAL MONITORING
REPORT

JULY THRU DECEMBER, 2002

ENVIRONMENTAL INSPECTION REPORTS

ENVIRONMENTAL INSPECTION

DATE: 8-27-02

TIME START: 0920

INSPECTOR: Max Chischilly Jr.

TIME END: 1100

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u> </u>	<u> ✓ </u>	<u>SEE BELOW.</u> <u>NA - ONLY UNDER AN RWP</u>
2. Air Monitors	<u> - </u>	<u> NA </u>	<u> </u> <u>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 1 BULL OUT OF THE RECLAIMED TAILINGS AREA. COWS AND BULLS ARE GAINING ENTRY THRU AN OPENING UNDERNEATH PERIMETER FENCE-LINE (≈ 6' LONG) LOCATED @ BOTTOM OF ARROYA @ 2 LOCATIONS (I.E. SW CORNER AREA AND NEAR THE MAIN NORTH GATE ENTRANCE, ADJACENT TO 2 STEEL DRAINAGE CULVERTS. THIS OPENING IS CAUSED BY THE RECENT RAIN FLOODING AND EROSION IN THE ARROYA. OPENING IS CLOSED UP AND REINFORCED WITH 7' STEEL T-POST AND FENCE WIRE MESH ON 8-30-02 BY A CONTRACT LABORER (JESSE BOGART).

ENVIRONMENTAL INSPECTION

DATE: 9-27-02

TIME START: 1430

INSPECTOR: May Chisholm Jr.

TIME END: 1545

TAILINGS AREA:

OKAY

PROBLEM

COMMENTS

1. Fences

✓

ONLY UNDER AN RWP
IF NECESSARY.

2. Air Monitors

- NA

-

3. Radiation Warning Signs

✓

4. Locked Gates

✓

ACTION TAKEN: _____

ENVIRONMENTAL INSPECTION

DATE: 10-31-02

TIME START: 0920

INSPECTOR: Max Churchill Jr.

TIME END: 1130

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 IF NECESSARY.</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 5-22-02, THE DOMESTIC
MILL WATER WELL IS CURRENTLY BEING PUMPED AND DISCHARGED INTO
THE TAILINGS EVAPORATION PONDS. THIS IS DONE TO HELP MAINTAIN
AND PRESERVE THE EVAPORATION POND LINERS SINCE ALL EXTRACTION
PUMPING/DISCHARGE ACTIVITY HAD CEASED FOR AN INDEFINITE PERIOD
ON 1-8-01 AND THE PONDS WERE DRYING OUT.

ENVIRONMENTAL INSPECTION

DATE: 11-26-02

TIME START: 0940

INSPECTOR: May Chinchilly Jr.

TIME END: 1050

TAILINGS AREA:

	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u>CHASED 8 BURROS OUT OF THE</u> <u>So. END TAILINGS AREA. FENCE-</u> <u>LINE CHECKED OK.</u>
2. Air Monitors	<u>- NA -</u>	<u> </u>	<u> </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: 12-6-02

TIME START: 0915

INSPECTOR: Max Chockilly J.

TIME END: 1020

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u>_____</u>	<u>ONLY UNDER AN RWP</u>
2. Air Monitors	<u>- NA -</u>	<u>_____</u>	<u>IF NECESSARY.</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>μcl/ml</u>	<u>LLD</u> <u>μcl/ml</u>
				<u>Mg/l</u>	<u>μcl/ml</u>		
<u>07/09/02</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total	_____	<u>6.32E-08</u>	_____	<u>2.00E-10</u>
<u>3rd.-Qr.</u>	_____	<u>Water Well</u>	Th-230 (dissolved) or total	_____	<u><2.00E-10</u>	_____	<u>2.00E-10</u>
<u>(Qvar. Sample)</u>	_____	_____	Ra-266 (dissolved) or total	_____	<u><2.00E-10</u>	_____	<u>2.00E-10</u>
UNC Field Data:	PH (STD. Units) = 6.78		Pb-210 (dissolved) or total	_____	<u><1.00E-09</u>	_____	<u>1.00E-09</u>
	Cond. (μ MHOS) = 5,250		Po-210 (dissolved) or total	_____	_____	_____	<u>1.00E-09</u>
	Water Depth (Ft.) = 50.35						
	Temp. (°C) = 19.7						

COMMENTS:

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QUARTERLY LIQUID SAMPLES

<u>Date/Qr.</u>	<u>Location</u>	<u>Type</u>	<u>Radionuclide</u>	<u>Concentration</u>		<u>Error Est.</u> <u>µci/ml</u>	<u>LLD</u> <u>µci/ml</u>
				<u>Mg/l</u>	<u>µci/ml</u>		
<u>10/07/02</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total	_____	<u>4.83E⁻⁰⁸</u>	_____	<u>2.00E-10</u>
<u>4th-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) = 6.67 Cond. (µ MHOS) = 5,430 Water Depth (Ft.) = 50.50 Temp. (°C) = 17.4		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:



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 #:
 REVISED REPORT DATE:

GW-3	GW-3	GW-3	GW-3
C02050336-013	C02060276-013	C02070393-013	C02100477-005
05/07/2002 10 40	06/04/2002 10 45	07/09/2002 11:00	10/07/2002 14:10
05/10/2002 10 00	06/10/2002 10.00	07/12/2002 10.00	10/14/2002 10.00
June 5, 2002	June 27, 2002	July 24, 2002	November 8, 2002
TE-8-5-2002	TE-9-6-2002	TE-10-7-2002	TE-12-10-2002
-	-	-	December 30, 2002

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0 05	953	958	953	884
Magnesium	EPA 200.7	mg/L	0 01	288	293	302	276
Sodium	EPA 200 7	mg/L	0 05	250	236	157	223
Potassium	EPA 200 7	mg/L	0 10	10.2	8 0	8 8	8 0
Bicarbonate	SM 2320-B	mg/L	0 10	1510	1520	1560	1620
Sulfate	EPA 200 7	mg/L	1 0	2120	2110	2170	2030
Chloride	EPA 200 7	mg/L	1 0	159	148	127	150
Ammonia as N	SM 4500-NH3-G	mg/L	0 05	0 08	0 10	0 24	0 22
Nitrate + Nitrite as N	EPA 353 2	mg/L	0 10	82 4	83 4	93 2	83 8

Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1 0	5320	5330	5430	4510
pH	SM 4500-H-B	std. units	0 10	7 44	7 67	7 38	7 35

Trace Metals, dissolved							
Aluminum	EPA 200 8	mg/L	0 10	< 0 10	< 0 10	< 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 18	1 97	1 79	1 95
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 08	< 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 0800	0 0789	0 0934	0 0713
Radium 226	EPA 903 0	pCi/L	0 2	< 0 2	0 4	< 0 2	< 0 2
Radium Error Estimate ±				-	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-Rn&U	EPA 900 1	pCi/L	1 0	< 1 0	< 1 0	< 1 0	< 1 0
G Alpha Error Estimate ±				-	-	-	-

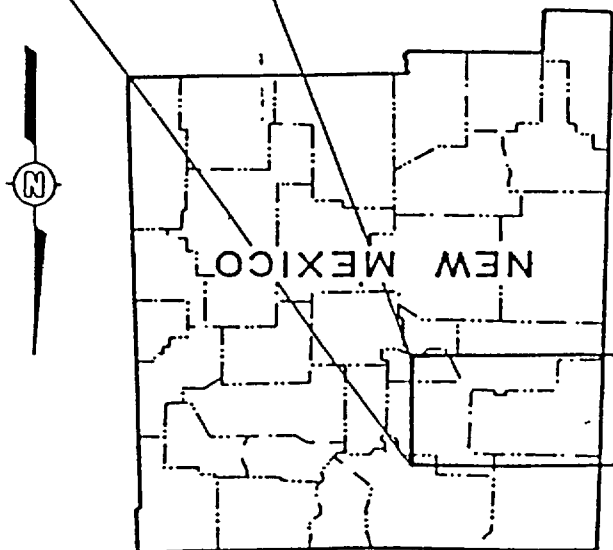
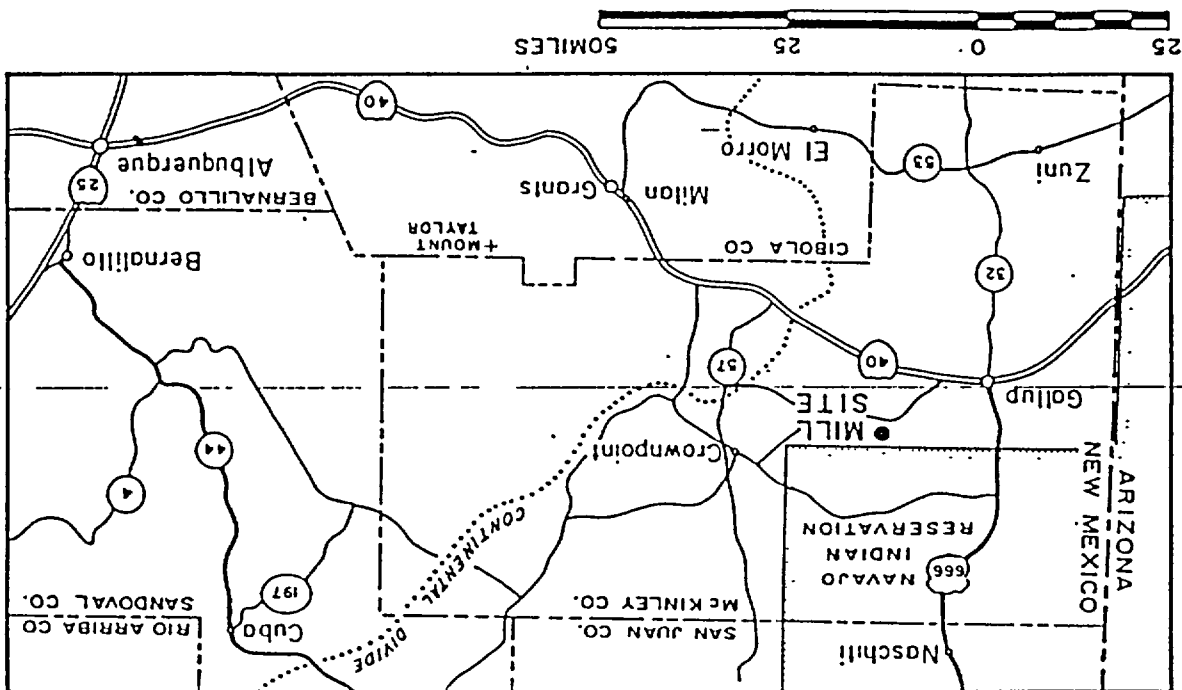
Trace Organics							
Chloroform	EPA 8260	µg/L	1 0	< 1 0	< 1 0	< 1 0	< 1 0

Quality Assurance Data		Target Range					
Anion	meq			79 3	79 0	81 0	79 1
Cation	meq			82 9	82 9	80 0	77 2
SM A/C Balance	%	-5 - +5		2 23	2 41	-0 64	-1 18
Calc TDS	mg/L			4903	4885	4913	4754
TDS A/C Balance	dec %	0 80 - 1 20		1 09	1 09	1 11	0 95

SAMPLING LOCATION MAPS

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

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



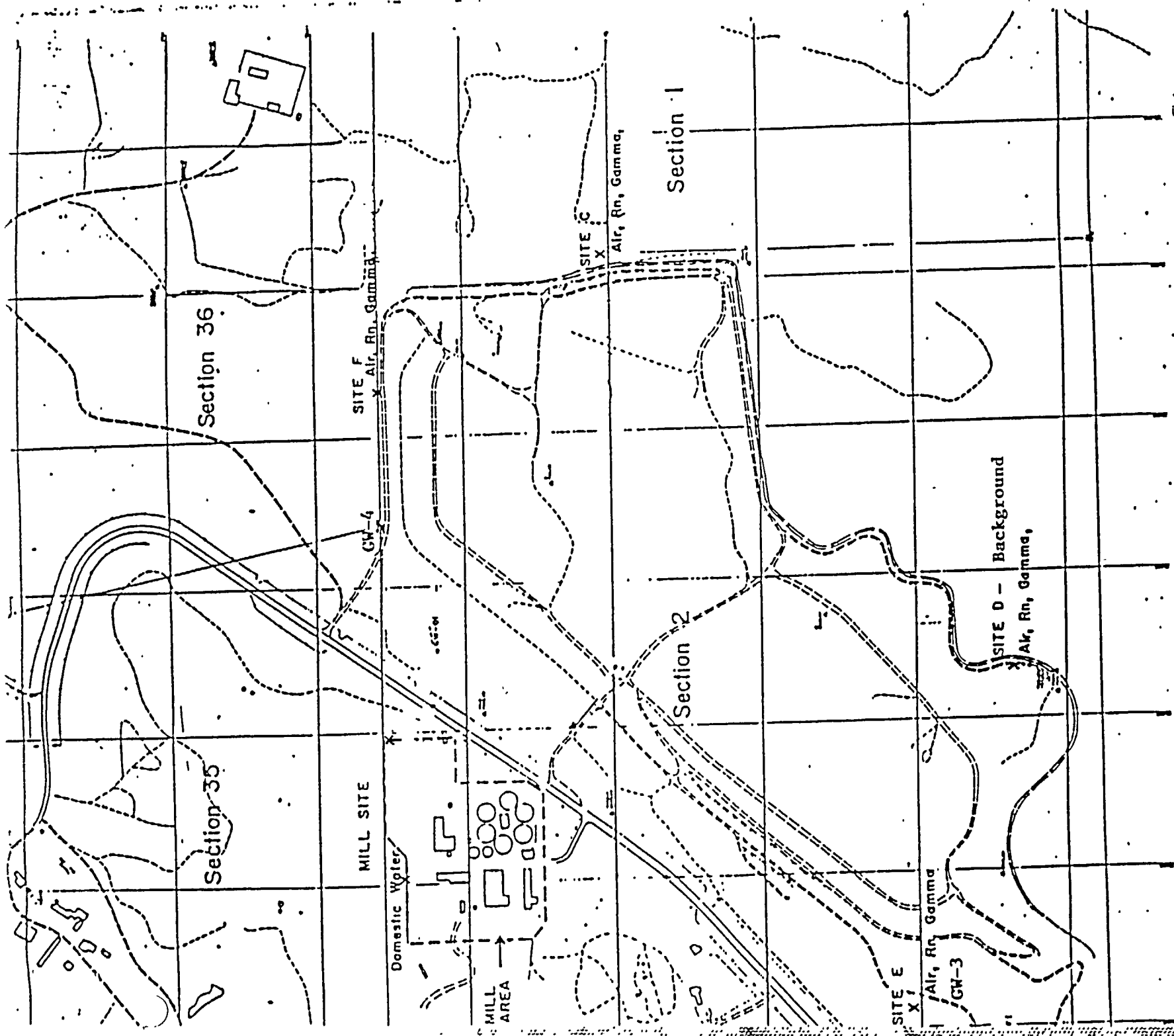
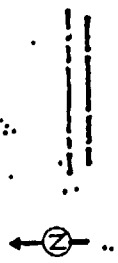


FIGURE 2



UNITED NUCLEAR CORPORATION	
PLANNING DEPT.	DATE: 11/18/80
BY: J. L. BAKER	
CHECKED BY: J. L. BAKER	
SCALE: AS SHOWN	