TIC 40-8380

8005140161

ROCKY MOUNTAIN ENERGY COMPANY

April 8, 1980

Mr. Dennis Morrow, District Engineer
DEQ, Land Quality Division
District IV
Sheridan, Wyoming 82801

Re: Nine Mile Lake; Pattern 3 Status Report

Dear Mr. Morrow:

Enclosed are the available sample results from the March 20th and April 1st sampling of Pattern 3 monitor wells. Also included are values for uranium, arsenic and selenium for the February 26th and March 20th samples of wells M-40, M-40A, M-40B and M-43.

As of April 1, 1980 injection into both the upper and lower ore zones was curtailed. At the present time, production continues at 5 gpm from the upper (Well M-40B) and the lower (Well M-40A) ore zones for a net production flow of 10 gpm. This flow is being routed through the ion exchange columns to the lime neutralization reactor/clarifier at which point the underflow is discharged to the evaporation reservoir. The overflow from the lime clarifier goes to the clay lined treated water reservoir.

If you have any questions, please give me a call at Nine Mile Lake (307-237-8326).

Sincerely,

Mike Neumann

M. R. Neumann
Field Environmental Coordinator

MN:en

Enclosure

cc: Margery Hulbert (DEQ)
Jack Rothfleisch (NRC)
NRC - Region IV
867.1
Kent Loest
Pat Spieles

FEE EXEMPT 15118

P.O. BOX 3719 CASPER WYOMING 82602 (307) 237-9425

Sample Date	Sample Description	pH	Eh EMF MV	EMF MV	Cond umhos	Alk mg/l as $CaCO_3$	Hard mg/l as $CaCO_3$	CO_3 mg/l	HCO_3 mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l		Gross α pCi/l	Gross β pCi/l	Pb-210 pCi/l	Po-210 pCi/l	Ra-226 pCi/l	Th-230 pCi/l
M-40	UCL	6.3*			3110					137	85	615	16	1.4	2522	42	0.42	2717		0.04	0.05	.055				3.24	17.3	12.6	37.9
2/26/80	M-40																			.004	.012	140							
3/3/80	M-40	6.8			2750					89	41	490	27.5	0.1	1180		0.6	2120											
3/20/80	M-40	6.9			2600					83	33	457	12.8	0.1	1184		0.6	2200		.004	.013	.025							
4/1/80	M-40	7.6			2300					104	48.2	488	23.5	0.2	1165	4.1	0.1	2100											
2/26/80	M-40A																			.004	ND	.03							
3/20/80	M-40A	7.9			3100					80	36	536	22.0	0.2	1425		.02	2480		.005	ND	.016							
4/1/80	M-40A	7.2			2800					131	69.2	559	20.5	0.4	1498	37.2	<0.1	2640											
2/26/80	M-40B																			.004	ND	.130							
3/20/80	M-40B	7.2			2800					102	33	464	17.9	0.9	2015		0.18	2200		005	ND	.155							
4/1/80	M-40B	7.4			2500					114	57.2	486	16.4	0.7	1256	37.2	<0.1	2190	-										

* Value given is the LCL (Lower Control Limit)

Sample Date	Sample Description	pH	Eh EMF	Cond	Alk	Hard	CO_3	HCO_3	Ca	Mg	Na	K	Fe	SO_4	Cl	V	TDS	Mn	As	Se	U_3O_8	Gross α	Gross β	Pb-210	Po-210	Ra-226	T
			MV MV	umhos	mg/l as $CaCO_3$	mg/l as $CaCO_3$	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pC
M-43	UCL	6.4*							94	49	544	14	093	1266	43	0.29	2325		0.05	0.02	.035			8.2	34.2	70.9	3
2/26/80	M-43																		.002	.04	.66						
3/20/80	M-43																		.006	ND	1.2						
4/1/80	M-43	6.7		2500					92	30	438	24.5	0.4	1238		1.78											

*Value given is the LCL (Lower Control Limit)

Sample Date	Sample Description	pH	Eh EMF MV	Eh EMF MV	Cond	Alk	Hard	CO_3	HCO_3	Ca	Mg	Na	K	Fe	SO_4	Cl	V	TDS	Mn	As	Sc	U_3O_8		Gross α	Gross β	Pb-210	Po-210	Ra-226	
					umhos	mg/l as $CaCO_3$	mg/l as $CaCO_3$	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	
11-41	UCL	6.3*								91	48	546	14	0.99	1582	40	0.33	2429	0.34	.04	.04	.07				24.9	13.4	3.0	
3/3/80	M-41	6.9			2500					80	34	444	7.7	0.1	1155		0.2	1980											
4/1/80	M-41	6.2			2800					140	69.2	505	11.6	0.3	1332	360	4.1	2240											

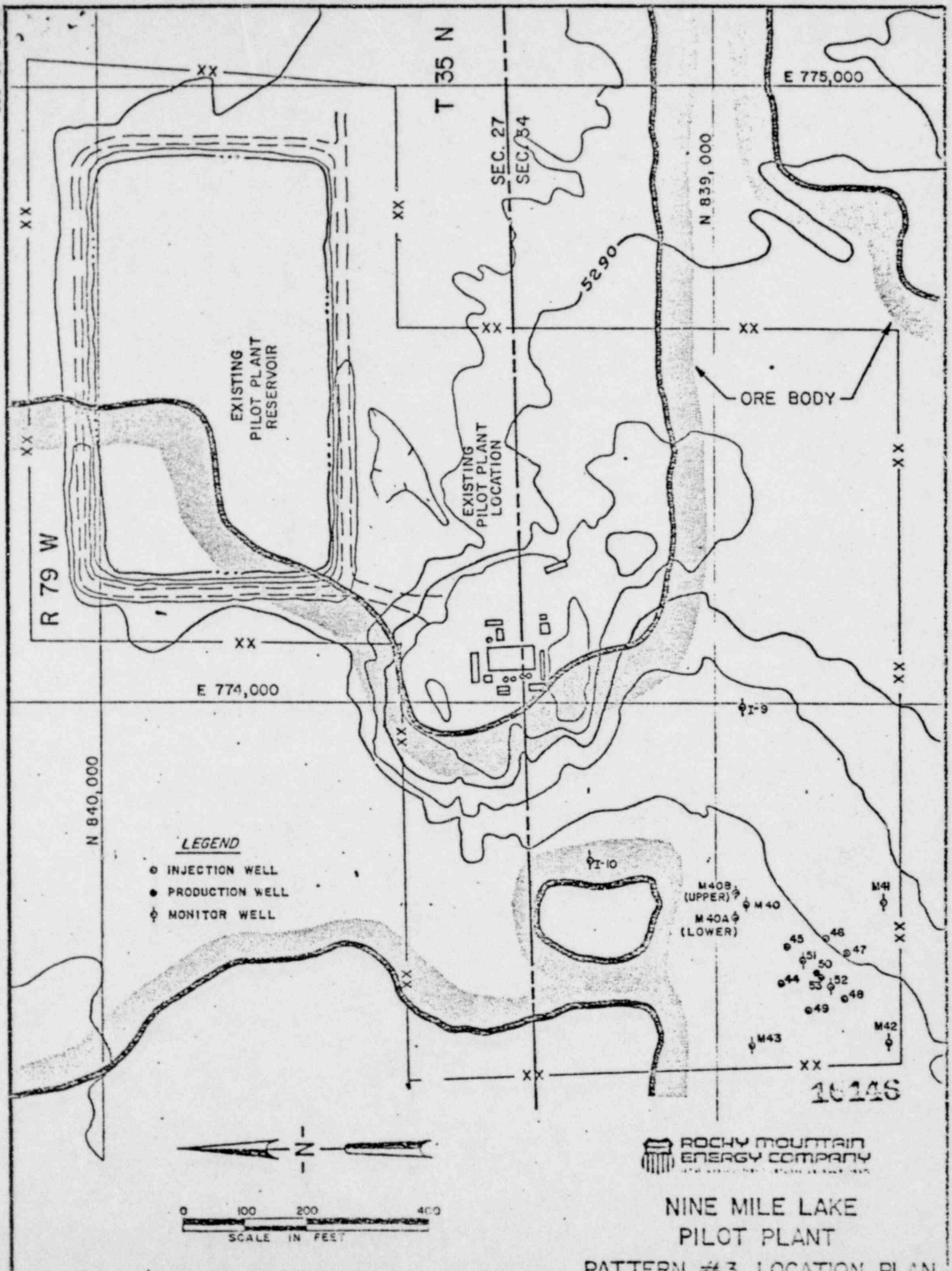
* Value given is the LCL (Lower Control Limit)

o = probable analytical error, will be rerun.

Sample Date	Sample Description	pH	Eh EMF MV	EMF MV	Cond umhos	Alk mg/l as $CaCO_3$	Hard mg/l as $CaCO_3$	CO_3 mg/l	HCO_3 mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	Fe mg/l	SO_4 mg/l	Cl mg/l	V mg/l	TDS mg/l	Mn mg/l	As mg/l	Se mg/l	U_3O_8 mg/l		Gross α pCi/l	Gross β pCi/l	Pb-210 pCi/l	Po-210 pCi/l	Ra-226 pCi/l	Th pC
11-42	UCL	6.4*								80	51	545	17	2.1	1716	47	0.35	2245	0.31	.02	.02	.049				24.5	12.7	62.1	2
3/3/80	M-42	7.0								71	34	434	6.7	0.3	1122		0.1	1820											
4/1/80	M-42	7.1								(81)	42	476	8.3	0.3	1127	29.8	<0.1	1240											

*. Value given is the LCL (Lower Control Limit)

O = probable analytical error, will be rerun


T 35 N
R 79 W
SEC. 27
SEC. 34
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EXISTING PILOT PLANT RESERVOIR
EXISTING PILOT PLANT LOCATION
ORE BODY
LEGEND
INJECTION WELL
PRODUCTION WELL
MONITOR WELL
I-9
I-10
M40B (UPPER)
M40
M40A (LOWER)
M41
M42
M43
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46
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0 100 200 400
SCALE IN FEET
ROCKY MOUNTAIN ENERGY COMPANY
NINE MILE LAKE
PILOT PLANT
PATTERN #3 LOCATION PLAN