Docket No 40-8340
PDR

ROCKY MOUNTAIN ENERGY COMPANY

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APR 14 1981
U.S. Nuclear Regulatory Commission
Mail Section

April 3, 1981

Mr. Richard Chancellor, District Supervisor
DEQ, District IV
Land Quality Division
30 East Grinnell Street
Sheridan, Wy 82801

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APR 16 1981
U.S. NUCLEAR REGULATORY COMMISSION
Mail Section

Dear Mr. Chancellor:

RE: TFN 1 5/186, Nine Mile Lake
Patterns 3 and 4 Status Report

Attached are results of the March sampling of the Pattern 3 and 4 wells at Nine Mile Lake. Also included are arsenic and selenium values for the February sampling of the wells. The Pattern 4 wells are below upper control limits with the exception of vanadium in M-55 and uranium in M-56.

The Pattern 3 wells again show no significant change over the last several months.

Restoration of Pattern 4 continues while Pattern 3 is being maintained at a 10-15 gpm production rate with no injection.

Please call if you have any questions.

Sincerely,

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APR 28 1981
U.S. NUCLEAR REGULATORY COMMISSION

Michael R. Neumann

Michael R. Neumann
Field Environmental Coordinator

MRN/pa
cc: Margery Hulburt (DEQ)
Tony Mancini (DEQ)
Tom Mueller (DEQ)
Fred Ross (NRC)
R. E. Hynes
NRC Region IV
8.20-4

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PO BOX 3719 CASPER WYOMING 82602 (307) 12

NINE MILE LAKE

PATTERN IV MONITOR WELLS

MONTH OF MARCH 1981

WELL M-54

Date	Well No.	pH	Cond. µmhos/cm	Chloride mg/l	HCO_3 mg/l	U_3O_8 mg/l	Calcium mg/l	Vanadium mg/l	Arsenic mg/l	Selenium mg/l	Ra-226 pci/l	Th-230 pci/l
UCL		7.51	N.A.	N.A.	322	0.178 * / 1.392 **	N.A.	0.163 * / 1.32 **	0.078	0.208		
2/3/81									0.011	<0.002		
3/9/81		6.16			207	0.048		0.140				

* EXISTING UCL

** PROPOSED UCL

NINE MILE LAKE

PATTERN IV MONITOR WELLS

MONTH OF MARCH 1981

WELL M-55

Date	Well No.	pH	Cond. µmhos/cm	Chloride mg/l	HCO_3 mg/l	U_3O_8 mg/l	Calcium mg/l	Vanadium mg/l	Arsenic mg/l	Selenium mg/l	Ra-226 pcl/l	Th-230 pcl/l
UCL		7.76	3285	59	380	0.464* / 1.392**	133	0.077* / 1.32**	0.012	0.154		
2/3/81									0.0072	<0.002		
3/9/81		7.01	2300	31.3	309	0.051	63	0.21				

* EXISTING UCL

** PROPOSED UCL

NINE MILE LAKE

PATTERN IV MONITOR WELLS

MONTH OF MARCH 1981

WELL M-56

Date	Well No.	pH	Cond. µmhos/cm	Chloride mg/l	HCO_3 mg/l	U_3O_8 mg/l	Calcium mg/l	Vanadium mg/l	Arsenic mg/l	Selenium mg/l	Ra-226 pci/l	Th-230 pci/l
UCL		7.63	3080	57	373	0.193* / 1.392**	107	0.37* / 1.32**	0.018	0.260		
2/3/81									0.0094	0.008		
3/9/81		6.96	2800	34.3	333	0.218	83	0.09				

* EXISTING UCL

** PROPOSED UCL

NINE MILE LAKE

PATTERN IV MONITOR WELLS

MONTH OF _____

WELL M-57

Date	Well No.	pH	Cond. µmhos/cm	Chloride mg/l	HCO_3 mg/l	U_3O_8 mg/l	Calcium mg/l	Vanadium mg/l	Arsenic mg/l	Selenium mg/l	Ra-226 pcl/l	Th-230 pcl/l
UCL		7.80	3218	61	373	0.150* / 1.392**	112	0.34* / 1.32**	0.024	0.087		
1/3/81									0.0094	0.015		
3/9/81		6.93	2800	40.6	326	0.144	91	0.30				

* EXISTING UCL

** PROPOSED UCL

Sample Date	Sample Description	pH	Eh EMF MV	Eh EMF MV	Cond umhos	Alk mg/l as CaCo3	Hard mg/l as CaCo3	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	2719		0.04	0.05	.055				22.4	47.8	10.6	37.9
2/2/81																				.007	.006								
3/11/81		6.5			2900										1422		0.26	1720				.255							
2/3/81	M-40A																			.008	<.002								
3/11/81	M-40A	6.81			3400										1721		0.05	2180				0.77							
2/3/81	M-40B																			.006	<.002								
3/3/81	M-40B	7.01			2600										1240		0.22					0.145							

* Value given is the LCL (Lower Control Limit)

POOR ORIGINAL

Sample Date	Sample Description	pH	Eh EMF MV	Eh EMF MV	Cond µmhos	Alk mg/l as CaCo	Hard mg/l as CaCo3	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	Sc 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-41	UCL	6.3*								91	48	546	14	0.99	1582	40	0.33	2429	0.34	.04	.04	.07				24.9	11.4	306	2.6
2/3/81																			0.007	<.002									
3/10/81		6.7			3200										1650		0.26	1648				0.092							

* Value given is the LCL (Lower Control Limit)

Sample Date	Sample Description	pH	Eh MV	EMF MV	Cond umhos	Alk mg/l as CaCo	Hard mg/l as CaCo3	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-42	UCL	6.4*								80	51	545	14	2.1	1716	47	0.35	2245	0.31	.02	.02	.049				245	17.7	62.1	2.6
2/3/81																				.006	<.002								
3/10/81		6.79			2400										1099		0.09	1720				0.076							

*Value given is the LCL (Lower Control Limit)

Sample Date	Sample Description	pH	Eh EMF MV	Eh EMF MV	Cond umhos	Alk mg/l as CaCo	Hard mg/l as CaCo3	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-43	UCL	6.4*								94	49	544	14	093	1266	43	0.28	2375		0.05	0.02	.035				8.2	24.0	70.9	3.8
2/3/81																				.007	<.002								
3/10/81		7.2			2560										1186		0.27	1960				0.591							

*Value given is the LCL (Lower Control Limit)

POOR ORIGINAL