



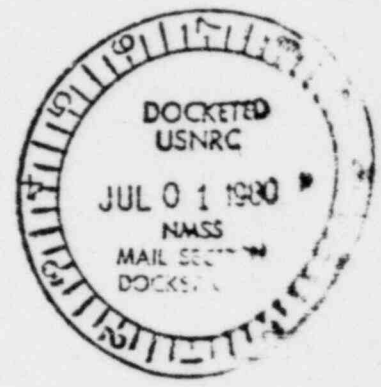
**ROCKY MOUNTAIN
ENERGY COMPANY**

~~DDP~~

40-8380

June 13, 1980

Dennis Morrow, District Engineer
Land Quality Division, District 4
30 East Grinnell Street
Sheridan, Wyoming 82801



Dear Mr. Morrow:

Re: Nine Mile Lake, Pattern 4 Preliminary Water Quality

Attached are copies of the preliminary water quality data for Pattern 4. It should be emphasized that the data presented is preliminary. Some analysis results are lacking at this time and outliers have not been removed. In addition, pre-mining sampling of some wells is continuing at this time. Upon completion of background sampling and receipt of all analytical results, a revised table presenting pre-mining water quality data will be submitted.

Please note that upper control limits for well M-54 have been established for pH, bicarbonate, uranium and vanadium only. Conductivity, chloride and calcium levels have continued to fluctuate, invalidating the use of these parameters for excursion control/detection. All other wells are representative of typical water quality found at the Nine Mile site.

If you have any questions about the water quality data or carbonate test pattern, please give me a call.

Sincerely,

Michael R. Neumann

M. R. Neumann
Field Environmental Coordinator

MRN/km

- cc: Margery Hulburt (DEQ)
- Tom Mueller (DEQ)
- Tony Mancini (DEQ)
- Jack Rothfleisch (NRC)
- Kent Loest
- Pat Spieles
- Rick Iwanicki

POOR ORIGINAL

8007240/00

NINE MILE LAKE
 PATTERN IV
 PRELIMINARY WATER QUALITY - PREMINING
 PRODUCTION WELL (P62)

<u>Constituent</u>	<u>\bar{x}</u>	<u>Constituent</u>	<u>\bar{x}</u>
Aluminum	0.09	Manganese	0.12
Alkalinity (CaCO ₃ eq.)	245	Mercury	*
Ammonia (N)	*	Molybdenum	0.03
Arsenic	0.01	Nickel	0.06
Barium	0.02	Nitrate (N)	*
Bicarbonate (HCO ₃)	299	Nitrite (N)	*
Boron	*	pH	6.72
Cadmium	*	Potassium	7.5
Calcium	84	Selenium	*
Carbonate (CO ₃)	0	Sodium	506
Chloride	46	Sulfate	2577
Chromium	0.12	TDS	2200
Conductivity ¹	2600	Vanadium	0.15
Copper	0.006	Zinc	0.01
Fluoride	*	Uranium (U ₃ O ₈)	*
Lead	0.05	Radium - 226 ²	*
Magnesium	45		

All values are given in milligrams/liter, except as noted

* Analysis is pending

¹ Units are μ mhos/cm

² Units are pCi/l

NINE MILE LAKE
 PATTERN IV
 PRELIMINARY WATER QUALITY DATA
 MONITOR WELLS

Parameter	Unit	M-54 ¹		M-55		M-56		M-57		SM-68 ²	
		\bar{x}	UCL	\bar{x}	UCL	\bar{x}	UCL	\bar{x}	UCL	\bar{x}	UCL
pH	pH	6.45	7.47	6.91	7.74	6.84	7.68	6.92	7.78	8.28	9.10
Conductivity	$\mu\text{mhos/cm}$	6980	*	3126	4807	2546	3053	2694	3353	14100	15510
Chloride	mg/l	80	*	41	60	39	58	42	60	228	251
Bicarbonate (HCO_3)	mg/l	275	349	318	377	299	369	310	369	641	705
Uranium (U_3O_8)	mg/l	0.128	0.239	0.278	0.554	0.100	0.186	0.103	0.159	*	*
Calcium	mg/l	284	*	104	134	85	107	89	112	535	588
Vanadium	mg/l	0.11	0.32	0.08	0.20	0.15	0.31	0.14	0.25	0.06	0.07

* Analysis Pending

¹ UCL for Ca, Cl, and Conductivity cannot be established due to severe fluctuations.

² Data represents one sampling only

$$\text{UCL} = \bar{x} + 2(s) + 10\% \bar{x}$$

18504