

ROCKY MOUNTAIN
ENERGY COMPANY

40-8380

PDR

May 1, 1980

Mr. Tom Mueller
DEQ - District IV
Water Quality Division
30 East Grinnel Street
Sheridan, WY 82801



Dear Mr. Mueller:

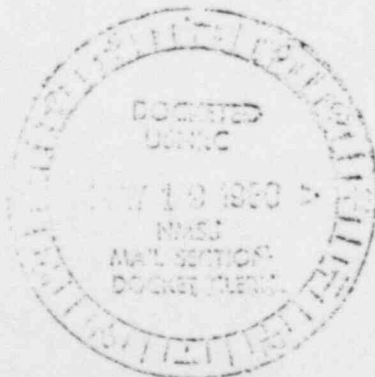
RE: Nine Mile Lake Treated Water Reservoir;
Permit No. 79-713

Attached are assay results of water being discharged to the new pond (Reservoir B) and monthly composites of water quality data in the new pond for the period of February 1st through April 27th.

Also, attached are graphs plotting pH, uranium, and vanadium levels in the discharge from the lime overflow for the period of February 1, 1980, to April 27, 1980. You will note that uranium values have consistently been less than 5 ppm, and that vanadium levels have dropped significantly since the pH in the lime clarifier/reactor was adjusted to about 7.8 (April 1st), indicating that the higher pH is effectively causing precipitation of most of the heavy metals in the lime underflow.

The last radium value which has been received was for the March 26th weekly composite. The assay was $11 \pm .9$ pCi/l, demonstrating that the barium chloride is effectively removing most of the radium prior to discharge.

To summarize, the corrective actions which have been taken to-date have been quite effective in lowering levels of vanadium, uranium, and radium in the discharge to Reservoir B to acceptable levels.



THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

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Mr. Tom Mueller
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If you have any question, please let me know.

Sincerely,

Michael R. Neumann

M. R. Neumann
Environmental Field
Coordinator

MRN/ph
Attachments

cc: Bill Garland (DEQ)
Margery Hulburt (DEQ)
Dennis Morrow (DEQ)
Jack Rothfleisch (NRC)
Kent Loest
Russ Hynes
Clark Bolser

NORTH POND ASSAYS - POND A

mg/l

Date	U ₃ O ₈	V	pH	SO ₄	TDS	Ca	Mg	Na	Fe	SiO ₂	Zn	As
2-26-80	2.1	68	3.69	4625	6460	241	82.3	1189	9.5	--	--	.02
3-30-80	6.6	120	3.69	15559	--	405	--	--	18	--	--	.014
4-28-80	8.9	140	3.75	16949	25720	518	325	5090	25.8	64.3	--	---*

*Pending

SOUTH POND ASSAYS - POND B

mg/l

Date	U ₃ O ₈	V	pH	SO ₄	TDS	Ca	Mg	Na	Fe	SiO ₂	Zn	As
2-26-80	2.8	11.5	8.38	2313	3960	524	51.2	443	0.1	37	1.3	0.009
3-26-80	2.2	11.2	7.69	2912	--	650	120	528	0.2	44	3.6	--*
3-30-80	1.3	12	7.60	3465	4320	991	108	507	0.2	40	2.1	--*
4-23-80	2.1	13.9	7.99	4323	6500	987	80.1	781	3.3	32.6	--*	--*

*Pending

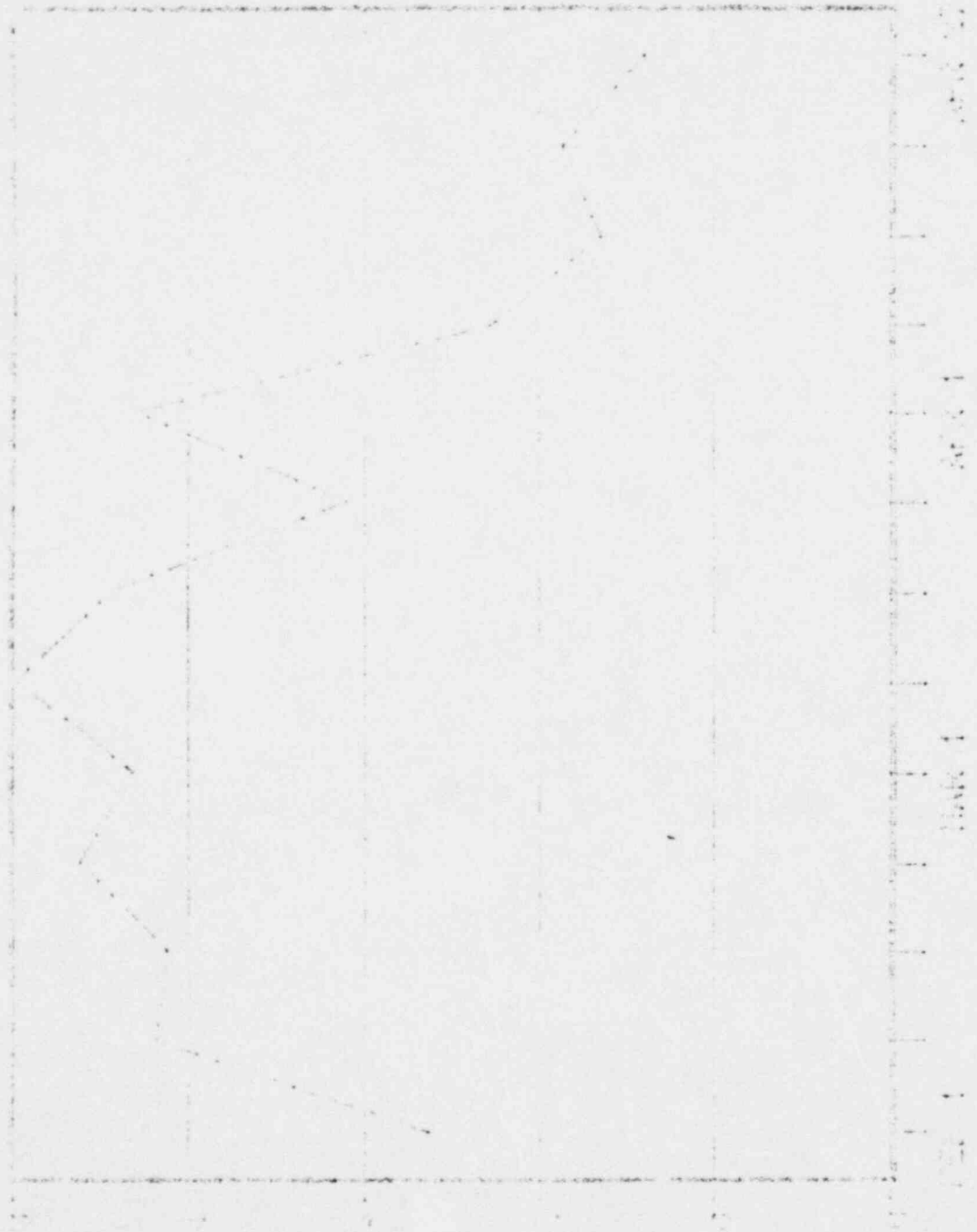
SOUTH POND - B
Ra-226
pCi/l

	<u>Feed</u>	<u>Lime O.F.</u>	<u>Lime U.F.</u>
Feb.	297	23.5	14380
Mar.		11.0 \pm 0.9	



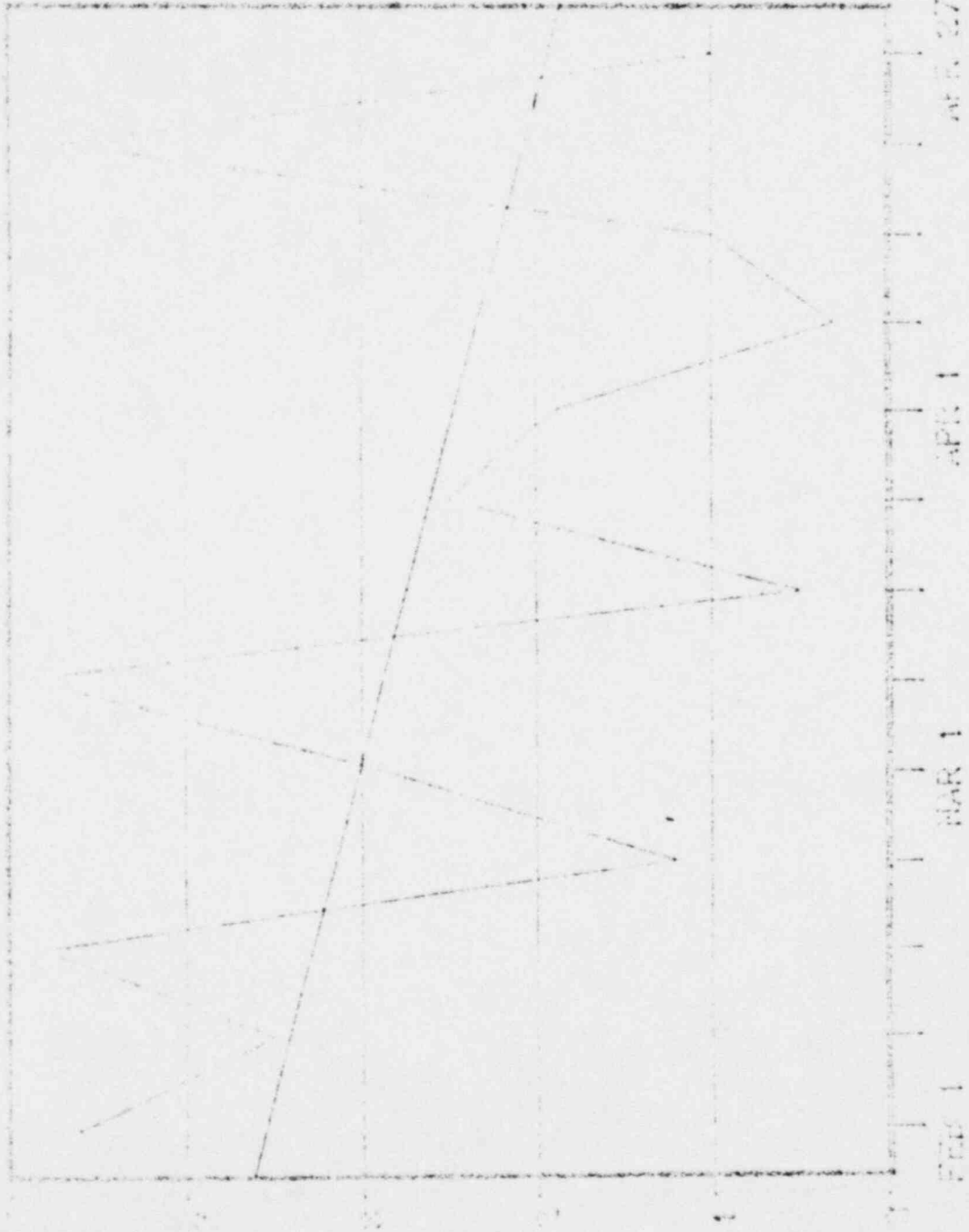
2/1/1938 THUR 4/23/1938

100



241/1033 TARD -W.7/1960

PH - ECONOMETRIC MODEL



U308 Avenue 2/1/1983 THRU 4/27/1983