

8008130069

TABLE I
RESTORATION RESULTS FOR PATTERN I, RENO CREEK PROJECT

Parameter*	1/1/80	2/1/80	3/1/80	4/1/80	5/1/80	6/1/80	6/30/80	7/5/80	7/12/80	7/16/80
Free Acid	319	466	331	114	219	112	151	140	100	85
pH	3.21	3.19	3.17	4.30	3.17	4.11	4.33	4.30	4.30	4.40
SO ₄	2470	2435	1701	1614	1669	1771	1794	1822	1828	1635
Conductivity	3300	4100	3300	2000	2300	1900	2200	2200	2000	2000
U ₃ O ₈	8.9	5.7	4.1	3.8	2.8	2.8	4.2	4.2	3.9	4.3
Fe	159	133	63	65	30	76	67	84	83	84
Ca	371	308	150	173	230	245	268	246	231	249
V	3.0	1.0	0.3	1.0	0.2	<0.1	1.1	---	0.9	0.8

* All parameters listed are given in milligrams per liter, except pH (standard units) and conductivity (micromhos/cm).

TABLE II
SUMMARY OF RESTORATION PROGRESS
PATTERN I
RENO CREEK PROJECT

Parameter ¹	Baseline Condition ² (5/15/78 through 9/20/78)	Water Quality During Mining (10/3/80)	Current Restoration Values (7/16/80)
Free Acid	-	626	85
pH	9.1 ± 1	2.33	4.40
SO ₄	806 ± 93	3202	1635
Conductivity	1516 ± 116	5800	2000
U ₃ O ₈	0.64 ± 0.4	15.9	4.3
Fe	1.6 ± 1.7	286	84
Ca	90 ± 6.7	399	249
V	2.03 ± 3	7.9	0.8

¹ All parameters listed are given in milligrams per liter, except pH (standard units) and conductivity (micromhos/cm).

² Mean plus or minus one standard deviation.

TABLE III
 RENO CREEK
 MAXIMUM AIRBORNE PARTICULATES (1)
 April - June 1980

<u>Sample Station</u>	<u>TSP</u> (3)	<u>Ra²²⁶</u> (2)	<u>Th²³⁰</u> (2)	<u>Uranium</u> (2)
Upwind Control (#12)	70	0.03	0.02	0.18
Upwind Restricted Area Boundary (#8)	64	0.03	0.01	0.18
Downwind Restricted Area Boundary (#10)	79	0.08	0.07	0.31

(1) Sample collected with a high volume air sampler

(2) Concentrations in microcuries per ml $\times 10^{-16}$

(3) Total suspended particulates in micrograms per cubic meter

TABLE IV
RENO CREEK
MAXIMUM OBSERVED RADON GAS CONCENTRATION
April - June 1980

<u>Sample Station</u>	<u>Rn-222 in $\mu\text{Ci/ml}$</u>
Upwind Control (#12)	0.44×10^{-9}
Upwind Restricted Area Boundary (#8)	0.39×10^{-9}
Downwind Restricted Area Boundary (#10)	0.23×10^{-9}

TABLE V
 RENO CREEK
 PATTERN I MONITOR WELLS
 MAXIMUM OBSERVED VALUE APRIL - JUNE VS. (CONTROL LIMIT)

	MONITOR WELLS ⁽¹⁾					
	<u>M-1</u>	<u>M-2</u>	<u>M-3</u>	<u>M-4</u>	<u>USM-1</u> ⁽²⁾	<u>LSM-1</u> ⁽³⁾
pH	(6.5)	(6.5)	(6.5)	(6.5)	(6.5)	(6.5)
	7.8	7.8	8.3	8.2	7.7	11.2
Conductivity (µmhos/cm)	(1980)	(1952)	(2200)	(2090)	(781)	(3080)
	1770	1715	1785	2050	745	2300
U ₃ O ₈ (mg/l)	(0.61)	(0.99)	(1.21)	(2.20)	(1.20)	(2.20)
	0.038	0.021	0.107	0.505	0.011	0.013
Calcium (mg/l)	(200)	(131)	(124)	(128)	(26)	(223)
	96	101	100	117	19	127
Sulfate (mg/l)	(825)	(946)	(998)	(1048)	(165)	(675)
	814	916	891	804	160	26

(1) Perimeter monitor wells located in each cardinal direction and in the same aquifer were sampled monthly.

(2) Located in aquifer above leaching zone

(3) Located in aquifer below leaching zone

TABLE VI
 MASS BALANCE SUMMARY
 April - June 1980

Month	Pregnant Solution Produced	Lixiviant Solution Injected	Net Produced (1)	Waste (2) to Pond
April	889533	621136	268397	269522
May	730750	574096	156654	157423
June	455742	368620	87122	88421

(1) Net Produced = Pregnant minus lixiviant

(2) Waste = Net produced plus plant waste