Quivira Mining Company

P.O. Box 218, Grants, NM USA 87020 (505)287-8851

March 26, 1999

Certified Mail
Return Receipt (P 268 361 016)

40-8905

Mr. George Brozowski
U.S.E.P.A.
1445 Ross Avenue
M/S 6PDT
Dallas, TX 75202

Re: 40 CFR 61 Subpart W
Annual Report - Calendar Year 1998

Dear Mr. Brozowski:

Quivira Mining Company submits the attached report in accordance with the requirements of 40 CFR 61 Subpart W for Quivira Mining Company's Ambrosia Lake uranium processing facility. This report covers the calendar year 1998 monitoring period. The results indicate that the facility is in compliance with the national emission standard for radon-222 of 20 picocuries per square meter per second.

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment. See, 18 U.S.C. 1001.

Regards,

Terry Fletcher

Terry Fletcher
General Manager

Attachment

xc: P. Goranson
P. Luthiger
NRC (D.C.)
NRC (TX)
File

040067

Quivira Mining Company

NESHAP SUBPART W ANNUAL REPORT

1998

March 26, 1999

QUIVIRA MINING COMPANY
RADON FLUX MEASUREMENT RESULTS
1998 TESTING PERIOD

Compliance with the emission standard must be determined in accordance with EPA Method 115 contained within 40 CFR § 61, Appendix B. EPA Method 115 requires the placement of a minimum of 100 samples on the surface of the impoundment. Collection and analysis of the radon flux samples were performed in accordance with the technique provided within Appendix A of EPA report 520/5-85-0029, "*Radon Flux Measurements on Gardinier and Royster Phosogypsum Piles Near Tampa and Mulberry, Florida.*"

Samples are collected through the use of a large area activated charcoal canniater ("LAACC") which are allowed to be exposed upon the tailings impoundment for twenty four hours. Upon collection and equillibation, the samples are then analyzed to determine the quantity of absorbed radioactivity via gamma spectroscopy. Compliance is determined by comparing the area weighted average flux to the 20 pCi/m^2-s standard.

Quivira obtained 105 measurements upon the northern half of tailings impoundment #2 at the locations depicted in Figures 1 and 2. Although the entire area of impoundment #2 is available for potential disposal, only those areas that have not received erosion protection were monitored. Measurements were initiated in June 1998 and were completed in August 1998.

Analytical results obtained from the radon flux measurements are provided in Table 1. The overall radon flux rate for impoundment #1 was determined to be 10.5 pCi/m^2-s. The 40 CFR 61 Subpart W emission standard is 20 pCi/m^2-s.

#2

QUIVIRA MINING COMPANY
RADON FLUX MEASUREMENT RESULTS
1998 TESTING PERIOD

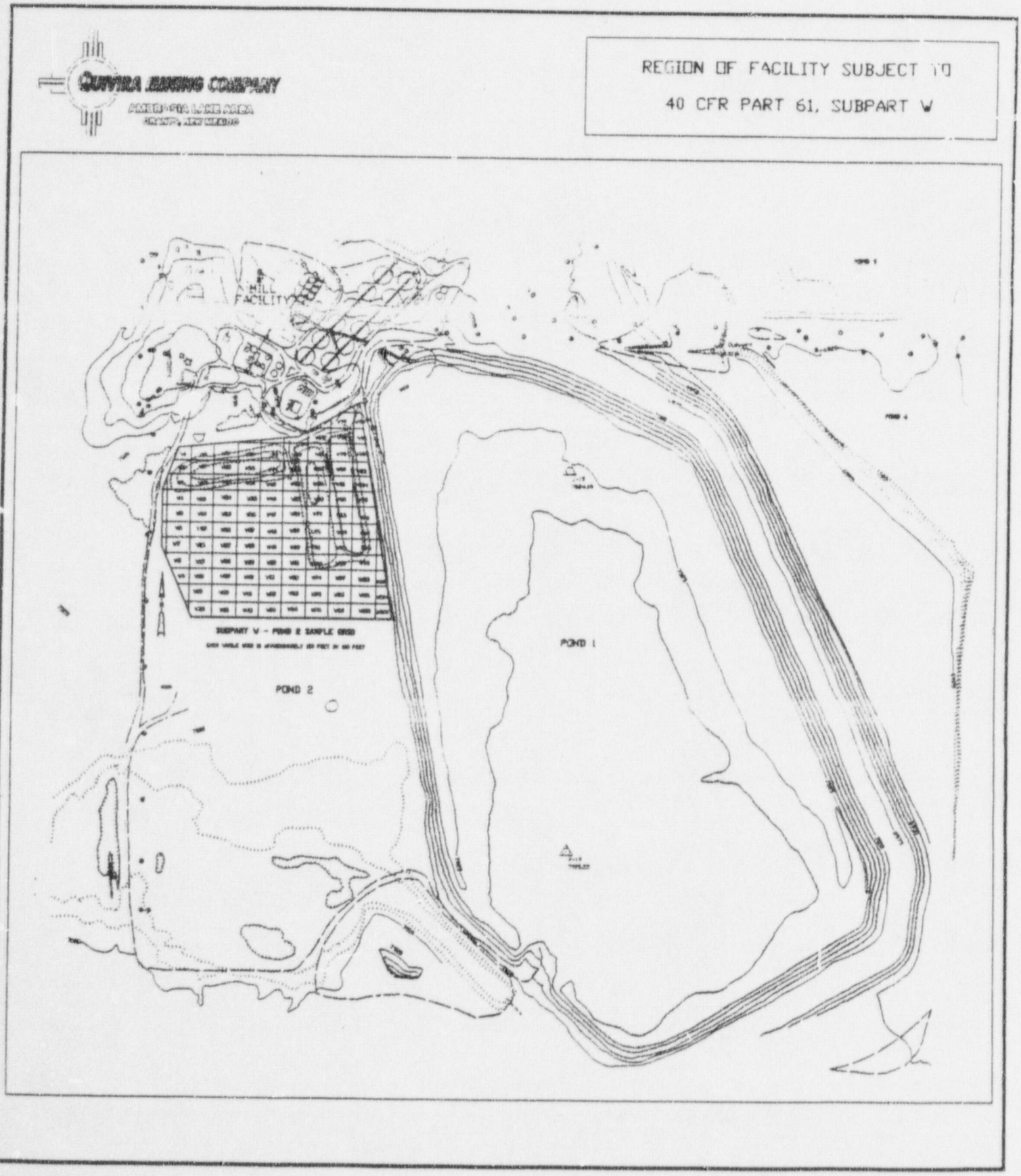
Facility Name: Quivira Mining Company - Ambrosia Lake facility
Facility Location: Ambrosia Lake, New Mexico
Facility Operator: Mr. Terry Fletcher, General Manager
Report Prepared by: Mr. Peter Luthiger, Supervisor of Radiation Safety and Environmental Affairs

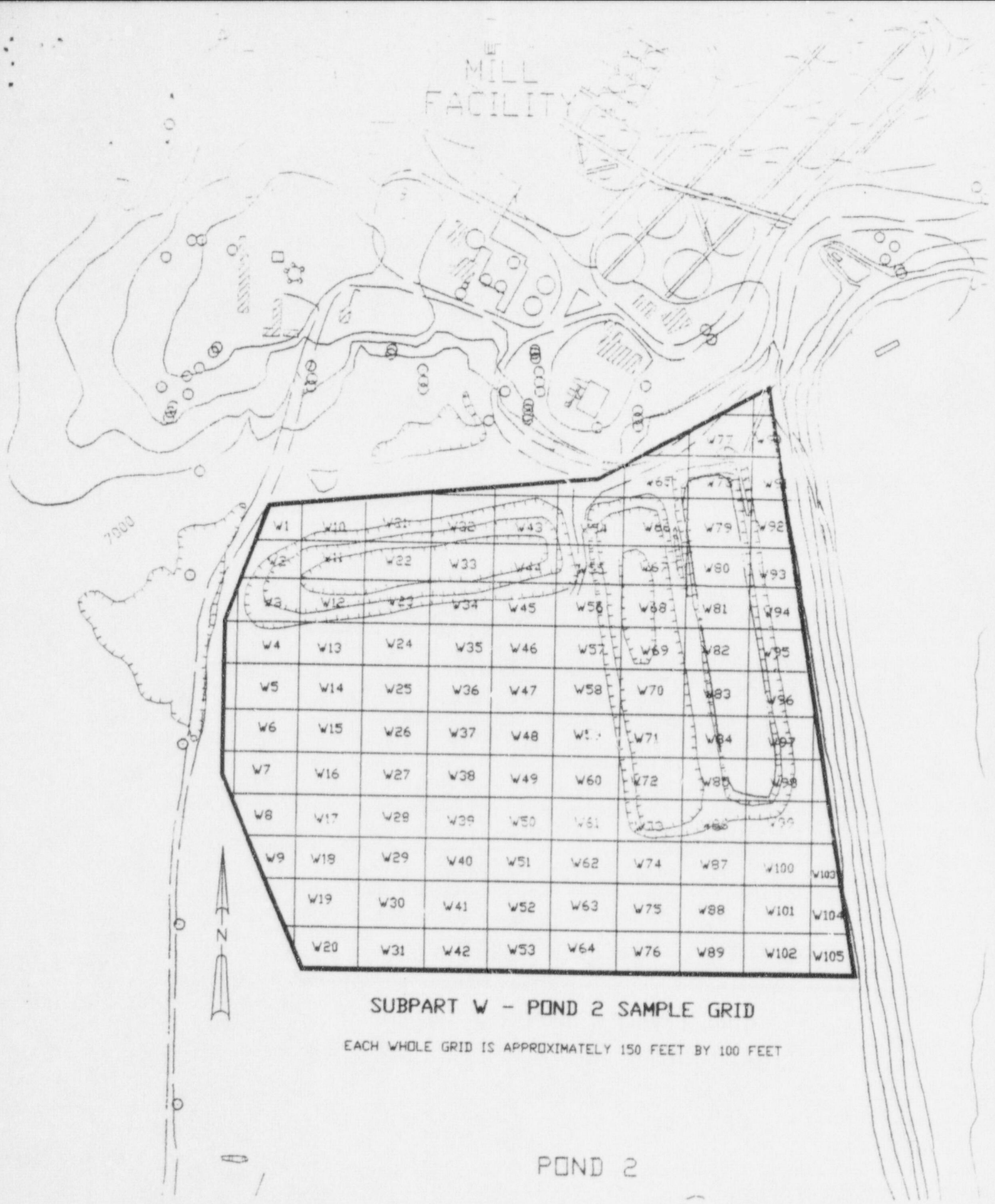
Radon Flux Testing Results

SAMPLE	FLUX	SAMPLE	FLUX	SAMPLE	FLUX
1	2.4	36	< 0.2	71	138.9
2	0.3	37	0.6	72	63.5
3	0.2	38	2.5	73	65.3
4	0.4	39	0.4	74	0.1
5	<0.1	40	< 0.1	75	< 0.1
6	0.4	41	0.1	76	< 0.1
7	< 0.1	42	0.3	77	11.7
8	0.2	43	0.1	78	13.3
9	1.0	44	5.7	79	0.0
10	1.1	45	9.0	80	0.0
11	4.2	46	0.2	81	0.0
12	106.6	47	0.1	82	0.0
13	1.1	48	< 0.1	83	64.4
14	0.2	49	1.1	84	92.2
15	0.2	50	0.5	85	87.7
16	3.0	51	< 0.1	86	0.6
17	1.3	52	0.2	87	0.3
18	0.5	53	0.3	88	0.3
19	1.6	54	0.5	89	0.4
20	0.3	55	13.4	90	0.8
21	2.7	56	1.3	91	0.4
22	12.6	57	0.1	92	0.4
23	26.3	58	0.3	93	0.3
24	0.5	59	0.2	94	0.5
25	0.6	60	0.3	95	0.6
26	0.4	61	0.2	96	0.5
27	1.6	62	0.3	97	0.4
28	4.0	63	< 0.1	98	0.4
29	2.4	64	< 0.1	99	0.1
30	1.4	65	0.7	100	0.5
31	0.7	66	35.5	101	0.2
32	2.9	67	53.1	102	0.4
33	5.8	68	48.5	103	0.9
34	0.1	69	132.1	104	1.2
35	0.1	70	58.7	105	0.3
			OVERALL AVERAGE FLUX →		10.5

Notes:
Collection method: 40 CFR 61, Appendix B, Method 115.
All values in picocuries per square meter per second.
Sample locations 79, 80, 81, and 82 were water covered areas.

FIGURE 1


QUIVIRA MINING COMPANY
REGION OF FACILITY SUBJECT TO
40 CFR PART 61, SUBPART W
MILL FACILITY
POND 1
POND 2



SUBPART W - POND 2 SAMPLE GRID

EACH WHOLE GRID IS APPROXIMATELY 150 FEET BY 100 FEET

FIGURE 2