



**KERR-McGEE CORPORATION**

KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

40-8027

PDR  
Return  
to 396SS

ENVIRONMENT AND HEALTH MANAGEMENT DIVISION

June 28, 1985

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Dr. Donald A. Cool  
Uranium Fuel Licensing Branch  
Division of Fuel Cycle & Material Safety  
Office of Nuclear Material Safety & Safeguards  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555



Re: License SUB-1010; Docket 40-8027 Re:  
Relicensing: Process Area Air Samples

Dear Dr. Cool:

Attached for incorporation into the Sequoyah Facility license renewal application are plant area air sampling data through 1984. These data, presented in expanded Table 13-4, provide a complete review of airborne radiological concentrations by plant processing section. We note the continuing downward trend in concentrations as they reflect our emphasis on environmental and employee exposure programs.

If you have any further questions concerning this material, please contact me.

Sincerely,

*J.C. Stauter*

J.C. Stauter, Director  
Nuclear Licensing & Regulation

JCS/br

Attachment: (1) As Stated

NRC: Eight (8) copies



**FEE EXEMPT**

8508070742 850628  
PDR ADOCK 04008027  
C PDR

25524

TABLE 11-4

Air Sample Statistics by the Month

(MPC =  $1 \times 10^{-10}$  uCi/ml)

## SAMPLING PLANT

( 4 Sample Locations in the Area)

	1979		1980		1981		1982		1983		1984	
	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily
	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration
JANUARY	.20	.47	.35	1.12	.25	1.12	.14	.47	.08	.21	.13	.79
FEBRUARY	.23	.86	.21	1.00	.16	.49	.21	1.30	.10	.35	.08	.23
MARCH	.21	.45	.15	.39	.17	.43	.11	.25	.15	.52	.09	.30
APRIL	.29	1.09	.18	.37	.12	.28	.13	.47	.08	.19	.06	.21
MAY	.37	2.28	.25	.76	.11	.26	.08	.16	.08	.72	.10	.56
JUNE	.22	.52	.27	.73	.11	.34	.08	.24	.10	.78	.05	.17
JULY	.16	.32	.38	1.00	.14	1.98	.06	.13	.07	.19	.08	.28
AUGUST	.29	.59	.27	.56	.14	.70	.13	.53	.12	1.22	.08	.32
SEPTEMBER	.31	1.18	.29	1.17	.16	.70	.09	.22	.05	.12	.08	.23
OCTOBER	.29	.55	.24	.44	.10	.28	.07	.13	.06	.16	.24	.49
NOVEMBER	.25	.60	.35	1.16	.08	.38	.09	.26	.05	.22	.06	.22
DECEMBER	.27	1.05	.18	.34	.10	.30	.09	.35	.08	.79	.05	.14

TABLE 13-4

Air Sample Statistics by the Month

(MPC =  $1 \times 10^{-10}$  dCi/ml)DIGESTION

( 5 Sample Locations in the Area)

	1979		1980		1981		1982		1983		1984	
	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily
	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration
JANUARY	.28	1.27	.22	.72	.36	2.76	.22	.97	.17	.51	.16	.75
FEBRUARY	.28	1.08	.25	1.00	.22	.80	.25	1.17	.25	1.57	.06	.14
MARCH	.19	1.20	.18	.81	.36	2.32	.25	1.20	.20	.64	.08	.32
APRIL	.16	.42	.25	1.11	.25	.53	.16	.63	.21	.89	.04	.08
MAY	.21	1.11	.13	.30	.20	1.02	.11	.31	.10	.25	.09	.70
JUNE	.11	.39	.32	2.98	.17	1.23	.10	.30	.10	.33	.08	.39
JULY	.17	.69	.50	1.79	.14	.32	.12	.41	.13	.41	.11	.38
AUGUST	.11	.61	.33	1.35	.17	.67	.15	.42	.11	.40	.09	.18
SEPTEMBER	.20	2.53	.36	1.76	.20	.68	.18	.50	.09	.54	.08	.22
OCTOBER	.15	.56	.23	.62	.22	1.13	.19	.85	.08	.54	.08	.23
NOVEMBER	.16	.66	.34	2.35	.22	.90	.32	1.71	.05	.14	.05	.10
DECEMBER	.17	.75	.27	.72	.23	.72	.28	1.66	.09	.53	.09	.22

TABLE 13-4  
Air Sample Statistics by the Month  
(MPC =  $1 \times 10^{-10}$  uCi/ml)

DENITRATION

( 6 Sample Locations in the Area)

	1979		1980		1981		1982		1983		1984	
	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration
JANUARY	.66	2.64	.40	1.72	.33	3.84	.18	.64	.20	.52	.10	.42
FEBRUARY	.19	.47	.28	.94	.23	1.17	.20	.57	.14	.41	.07	.18
MARCH	.18	.70	.30	2.06	.21	1.28	.33	1.97	.22	.97	.09	.45
APRIL	.12	.39	.29	2.31	.21	.86	.14	.26	.13	.57	.06	.15
MAY	.17	.49	.30	1.08	.10	.32	.10	.38	.11	.29	.10	.52
JUNE	.25	1.06	.62	2.70	.08	.42	.09	.27	.13	.69	.07	.29
JULY	.49	2.20	.53	2.77	.07	.16	.16	.88	.15	.63	.08	.21
AUGUST	.38	1.77	.43	2.25	.11	.36	.12	.30	.12	.35	.11	.23
SEPTEMBER	.39	1.33	.28	.97	.13	.32	.15	.37	.16	1.22	.05	.07
OCTOBER	.55	2.23	.49	2.56	.10	.25	.23	1.47	.06	.15	.07	.13
NOVEMBER	.38	2.14	.48	1.03	.09	.19	.30	1.52	.08	.54	.07	.39
DECEMBER	.44	2.44	.55	4.57	.12	.62	.19	.61	.10	.83	.05	.11

TABLE 13-4  
Air Sample Statistics by the Month  
(MPC =  $1 \times 10^{-10}$  uCi/ml)

REDUCTION-HYDROFLUORINATION

(11 Sample Locations in the Area)

	1979		1980		1981		1982		1983		1984	
	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration
JANUARY	.53	1.55	.47	1.94	.26	.62	.22	1.34	.21	.77	.15	.60
FEBRUARY	.29	1.70	.48	1.30	.30	1.38	.28	1.62	.27	1.09	.14	.56
MARCH	.38	1.38	.29	.56	.22	1.38	.32	1.18	.18	.27	.12	.47
APRIL	.24	.86	.47	1.95	.16	.63	.15	.30	.19	.58	.08	.22
MAY	.26	.73	.41	1.85	.14	.96	.13	.32	.22	1.90	.12	.62
JUNE	.50	1.88	.58	3.87	.11	.33	.15	.42	.18	1.70	.11	.71
JULY	.43	2.77	.55	1.64	.17	.48	.21	1.02	.10	.31	.16	.45
AUGUST	.45	3.04	.63	2.66	.17	.64	.31	2.10	.13	.39	.12	.34
SEPTEMBER	.32	.62	.67	2.24	.14	.39	.17	1.46	.15	1.03	.07	.30
OCTOBER	.65	2.16	.33	.82	.14	.89	.19	.54	.11	.48	.09	1.09
NOVEMBER	.48	1.37	.91	2.62	.16	.87	.39	2.35	.21	.99	.13	.74
DECEMBER	.53	1.41	.76	12.25	.19	.52	.16	.43	.19	.54	.07	.33

TABLE 13-a  
Air Sample Statistics by the Month  
(MPC =  $1 \times 10^{-10}$  uCi/ml)

FLUORINATION

( 11 Sample Locations in the Area)

	1979		1980		1981		1982		1983		1984	
	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily	Monthly Average	Maximum Daily
	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration	MPC Concentration
JANUARY	.40	3.04	.33	1.11	.36	1.16	.41	4.61	.12	.65	.18	1.12
FEBRUARY	.16	.59	.37	1.67	.27	.63	.12	.30	.11	.47	.06	.37
MARCH	.16	.92	.21	.54	.15	.47	.13	.66	.11	.38	.13	.82
APRIL	.13	.44	.22	.47	.07	.46	.16	.49	.10	.46	.06	.26
MAY	.12	.38	.21	1.65	.08	.25	.14	.35	.08	.27	.06	.20
JUNE	.21	.53	.28	.67	.09	.26	.18	.69	.09	.64	.13	.93
JULY	.38	1.73	.36	1.71	.14	.48	.33	1.20	.08	.44	.09	.25
AUGUST	.29	1.13	.36	1.35	.17	.69	.14	1.60	.11	.24	.09	.61
SEPTEMBER	.23	1.16	.48	2.88	.11	.58	.15	.58	.09	.57	.09	1.00
OCTOBER	.27	1.49	.37	1.01	.11	.75	.13	.56	.05	.14	.06	.21
NOVEMBER	.36	1.17	.87	4.60	.30	4.31	.27	1.66	.10	.71	.05	.27
DECEMBER	.36	1.60	.57	5.01	.23	1.12	.13	.38	.18	.70	.06	.27

TABLE 13-4  
Air Sample Statistics by the Month  
(MPC =  $1 \times 10^{-10}$  uCi/ml)

MISCELLANEOUS

( 11 Sample Locations in the Area)

	1979		1980		1981		1982		1983		1984	
	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration	Monthly Average MPC Concentration	Maximum Daily MPC Concentration
JANUARY	.06	.21	.07	.22	.09	.17	.05	.12	.04	.09	.05	.11
FEBRUARY	.06	.16	.07	.14	.07	.16	.04	.16	.04	.06	.04	.08
MARCH	.05	.10	.09	.20	.06	.31	.04	.15	.04	.09	.04	.11
APRIL	.04	.13	.08	.14	.06	.22	.03	.07	.03	.11	.03	.06
MAY	.10	.91	.10	.25	.03	.10	.03	.04	.02	.04	.03	.05
JUNE	.06	.19	.10	.34	.05	.41	.02	.10	.02	.05	.04	.12
JULY	.08	.39	.17	.96	.04	.08	.03	.05	.04	.06	.05	.07
AUGUST	.06	.20	.09	.24	.04	.07	.04	.18	.04	.07	.05	.07
SEPTEMBER	.06	.27	.11	.31	.05	.14	.04	.10	.03	.09	.05	.08
OCTOBER	.08	.17	.11	.52	.03	.09	.04	.08	.04	.08	.03	.08
NOVEMBER	.11	.45	.13	.55	.04	.08	.06	.15	.03	.05	.04	.10
DECEMBER	.08	.17	.14	1.01	.04	.07	.05	.16	.03	.08	.04	.11

DOCKET NO. 40-8027  
CONTROL NO. 25524  
DATE OF DOC. 06/28/85  
DATE RCVD. 07/15/85  
FCUF ☒ PDR ☒  
ECAF ☐ LPDR ☒  
WM ☐ I&E REF. ☒  
WMUR ☐ SAFEGUARDS ☐  
FCTC ☐ OTHER ☐

DESCRIPTION:

attached are  
plant area air  
sampling data  
through 1984

07/18/85 INITIAL CRC