

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Britt T. McKinney
Vice President Plant Operations and Plant Manager

DEC 16 1999

WO 99-0104

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Reference: Letter WO 99-0036, dated April 29, 1999, from
C. C. Warren, WCNO; to USNRC

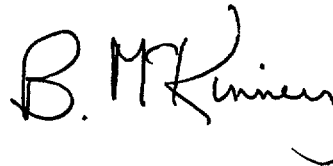
Subject: Docket No. 50-482: Correction to 1999 Annual Radioactive
Effluent Release Report (Report 22)

Gentlemen:

Attached are corrected pages for the 1999 Wolf Creek Generating Station (WCGS) Annual Radioactive Effluent Release Report (Report 22) covering the period from January 1, 1998, through December 31, 1998. Four pages (pages 8, 13, 22, and 23) of the original report contained data errors. The four attached pages contain the bolded and italicized corrected data.

We apologize for any inconvenience this incorrect data may have caused. If you should have any questions regarding this submittal, please contact me at (316) 364-8831, extension 4433, or Mr. Michael J. Angus at extension 4077.

Very truly yours,



Britt T. McKinney

BTM/jad

Attachment

cc: J. N. Donohew (NRC), w/a
W. D. Johnson (NRC), w/a
E. W. Merschoff (NRC), w/a
Senior Resident Inspector (NRC), w/a

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1998 LIQUID CUMULATIVE DOSE SUMMARY TABLE 1

QUARTER 1 OF 1998	ODCM CALCULATED DOSE	ODCM ¹ LIMIT	% OF LIMIT
TOTAL DOSE (mRem) FOR BONE	1.17E-03	5.00E+00	2.34E-02
TOTAL DOSE (mRem) FOR LIVER	7.70E-03	5.00E+00	1.54E-01
TOTAL DOSE (mRem) FOR TOTAL BODY	7.19E-03	1.50E+00	4.79E-01
TOTAL DOSE (mRem) FOR THYROID	5.60E-03	5.00E+00	1.12E-01
TOTAL DOSE (mRem) FOR KIDNEY	6.28E-03	5.00E+00	1.26E-01
TOTAL DOSE (mRem) FOR LUNG	5.84E-03	5.00E+00	1.17E-01
TOTAL DOSE (mRem) FOR GI-LLI	7.75E-03	5.00E+00	1.55E-01
QUARTER 2 OF 1998			
TOTAL DOSE (mRem) FOR BONE	9.98E-04	5.00E+00	2.00E-02
TOTAL DOSE (mRem) FOR LIVER	2.28E-02	5.00E+00	4.56E-01
TOTAL DOSE (mRem) FOR TOTAL BODY	2.23E-02	1.50E+00	1.49E+00
TOTAL DOSE (mRem) FOR THYROID	2.11E-02	5.00E+00	4.22E-01
TOTAL DOSE (mRem) FOR KIDNEY	2.17E-02	5.00E+00	4.33E-01
TOTAL DOSE (mRem) FOR LUNG	2.13E-02	5.00E+00	4.26E-01
TOTAL DOSE (mRem) FOR GI-LLI	2.28E-02	5.00E+00	4.57E-01
QUARTER 3 OF 1998			
TOTAL DOSE (mRem) FOR BONE	1.50E-03	5.00E+00	3.00E-02
TOTAL DOSE (mRem) FOR LIVER	1.89E-02	5.00E+00	3.77E-01
TOTAL DOSE (mRem) FOR TOTAL BODY	1.82E-02	1.50E+00	1.21E+00
TOTAL DOSE (mRem) FOR THYROID	1.65E-02	5.00E+00	3.31E-01
TOTAL DOSE (mRem) FOR KIDNEY	1.72E-02	5.00E+00	3.44E-01
TOTAL DOSE (mRem) FOR LUNG	1.66E-02	5.00E+00	3.33E-01
TOTAL DOSE (mRem) FOR GI-LLI	2.11E-02	5.00E+00	4.21E-01
QUARTER 4 OF 1998			
TOTAL DOSE (mRem) FOR BONE	2.74E-03	5.00E+00	5.49E-02
TOTAL DOSE (mRem) FOR LIVER	6.58E-02	5.00E+00	1.32E+00
TOTAL DOSE (mRem) FOR TOTAL BODY	6.45E-02	1.50E+00	4.30E+00
TOTAL DOSE (mRem) FOR THYROID	6.13E-02	5.00E+00	1.23E+00
TOTAL DOSE (mRem) FOR KIDNEY	6.27E-02	5.00E+00	1.25E+00
TOTAL DOSE (mRem) FOR LUNG	6.17E-02	5.00E+00	1.23E+00
TOTAL DOSE (mRem) FOR GI-LLI	6.51E-02	5.00E+00	1.30E+00
TOTALS FOR 1998			
TOTAL DOSE (mRem) FOR BONE	6.41E-03	1.00E+01	6.41E-02
TOTAL DOSE (mRem) FOR LIVER	1.15E-01	1.00E+01	1.15E+00
TOTAL DOSE (mRem) FOR TOTAL BODY	1.12E-01	3.00E+00	3.74E+00
TOTAL DOSE (mRem) FOR THYROID	1.04E-01	1.00E+01	1.04E+00
TOTAL DOSE (mRem) FOR KIDNEY	1.08E-01	1.00E+01	1.08E+00
TOTAL DOSE (mRem) FOR LUNG	1.05E-01	1.00E+01	1.05E+00
TOTAL DOSE (mRem) FOR GI-LLI	1.17E-01	1.00E+01	1.17E+00

1. Based on ODCM Section 2.2, which restricts dose to the whole body to less than or equal to 1.5 mRem per quarter and 3.0 mRem per year. Dose restriction of any organ is less than or equal to 5 mRem per quarter and 10 mRem per year.

1998 GASEOUS EFFLUENTS (Continued)

NUCLIDES RELEASED	Unit	Continuous Mode		Batch Mode	
		Quarter 3	Quarter 4	Quarter 3	Quarter 4
1. Fission and Activation Gases					
Ar-41	Ci	1.56E+00	n/a	4.97E-01	6.35E-01
Kr-85	Ci	n/a	n/a	n/a	3.37E+00
Kr-85M	Ci	n/a	3.23E-02	n/a	n/a
Kr-87	Ci	<2.82E+01	<2.88E+01	<1.14E-01	<7.42E-02
Kr-88	Ci	<2.10E+01	<2.15E+01	<8.48E-02	<5.54E-02
Xe-131M	Ci	n/a	n/a	n/a	6.16E-03
Xe-133	Ci	4.31E+00	4.85E+00	2.48E+00	1.15E+00
Xe-133M	Ci	<4.02E+01	<4.11E+01	<1.62E-01	4.45E-03
Xe-135	Ci	<5.48E+00	<5.61E+00	2.55E-03	<1.44E-02
Xe-138	Ci	<4.41E+02	<4.51E+02	<1.78E+00	<1.16E+00
Total	Ci	5.88E+00	4.88E+00	2.98E+00	5.17E+00
2. Halogens (Gaseous)					
I-131	Ci	<2.61E-04	<2.67E-04	<1.05E-06	<6.87E-07
I-133	Ci	<2.61E-02	<2.67E-02	<1.05E-04	<6.87E-05
Total	Ci	0.00E+00	2.22E-04	0.00E+00	0.00E+00
3. Particulates and Tritium					
H-3	Ci	2.48E+01	1.33E+01	1.06E+01	1.53E+00
Mn-54	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Fe-59	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Co-58	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Co-60	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Zn-65	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Mo-99	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Cs-134	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Cs-137	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Ce-141	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Ce-144	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Sr-89	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Sr-90	Ci	<2.61E-03	<2.67E-03	<1.05E-05	<6.87E-06
Gross Alpha	Ci	<2.61E-03	1.28E-08	<1.05E-05	<6.87E-06
Total	Ci	2.48E+01	1.33E+01	1.06E+01	1.53E+00

NOTE

“Less than” values for Noble Gases are calculated using the Lower Limit of Detection (LLD) values obtained at Wolf Creek Generating Station multiplied by the volume of air discharged during the respective quarter. For the Halogens and Particulates the ODCM LLD values are used.

**EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
1998 SOLID WASTE SHIPMENTS**

A. SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not irradiated fuel)

1.	Type of waste	Unit	1- Year Period	Est. Total Error %
	a. Spent resins, filter sludges evaporator bottoms, etc.	m3* Ci	8.28E+1 1.708E+2	2.50E+01
	b. Dry compressible waste, contaminated equip. etc.	m3* Ci	1.98E+02** 3.27E+00	2.50E+01
	c. Irradiated components, control rods, etc.	m3* Ci	0.00E+00 0.00E+00	0.00E+00
	d. Other (None)			

*m3 = cubic meters ** This is the volume sent offsite for volume reduction, prior to disposal.

2. Estimate of major nuclide composition (by type of waste). (*Includes nuclides with greater than 10% abundance*)

a. Spent resin, filter sludges, evaporator bottoms, etc.

Nuclide Name	Percent Abundance	Curies
Ni-63	25.00	4.27E+1
Fe-55	24.59	4.20E+1
Co-60	10.246	1.75E+1
Co-58	17.857	3.05E+1

b. Dry compressible waste, contaminated equipment, etc.

Nuclide Name	Percent Abundance	Curies
Fe-55	48.064	1.57E+00
Co-60	10.591	3.47E-01
Ni-63	17.058	5.58E-01

c. Irradiated components, control rods, etc.

none

d. Other **(None)**

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
1	Truck (Roberts Express)	CNSI --- Barnwell Waste Management Facility; Barnwell, SC
5	Truck (Tri-State Motor Transport)	CNSI --- Barnwell Waste Management Facility; Barnwell, SC
1	Truck (Kindrick Trucking)	Diversified Scientific Services; Kingston, Tennessee
3	Truck (Kindrick Trucking)	Frank W. Hake Associates, Memphis, Tennessee
1	Truck (Kindrick Trucking)	Manufacturing Sciences Corporation; Oak Ridge, Tennessee
3	Truck (Hittman Transport Services)	Scientific Ecology Group, Inc., Oak Ridge, Tennessee

4. Class of Solid Waste

- a. Class A, Class B, Class C- Corresponding to 2a
- b. Class A - corresponding to 2b
- c. Not applicable
- d. Not applicable

5. Type of container

- a. LSA (Strong, tight), Type A, Type B - corresponding to 2a
- b. LSA (Strong, tight) - corresponding to 2b
- c. Not applicable
- d. Not applicable

6. Solidification Agent

- a. Not applicable
- b. Not applicable
- c. Not applicable
- d. Not applicable

B. IRRADIATED FUEL SHIPMENTS (Disposition)

No irradiated fuel shipments occurred during the 1998 period.