

444 South 16<sup>th</sup> Street Mall  
Omaha, NE 68102-2247

June 15, 2012  
LIC-12-0087

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

- References:
1. Docket No. 50-285
  2. Letter from OPPD (T. C. Matthews) to NRC (Document Control Desk) *2009 Fort Calhoun Station (FCS) Radiological Effluent Release Report and Radiological Environmental Operating Report*, dated April 20, 2010 (LIC-10-0028)
  3. Letter from OPPD (S. E. Baughn) to NRC (Document Control Desk) *Fort Calhoun Station (FCS) Radiological Effluent Release Report and Radiological Environmental Operating Report*, dated April 26, 2011 (LIC-11-0046)
  4. Letter from OPPD (S. E. Baughn) to NRC (Document Control Desk) *Fort Calhoun Station (FCS) Radiological Effluent Release Report and Radiological Environmental Operating Report*, dated April 20, 2012 (LIC-12-0052)

**SUBJECT: Corrections to the 2011 Radiological Environmental Operating Report and to the 2009 – 2011 Radiological Effluent Release Reports**

The Omaha Public Power District (OPPD) is submitting corrections to the 2011 Radiological Environmental Operating Report and to the 2009 through 2011 Radiological Effluent Release Reports. The corrections to each of these reports are as follows:

**2011 Radiological Environmental Operating Report (Reference 4, Enclosure 2)**

Condition Report 2012-05247 identified the need to correct Table 3.0, *Listing of Missing Samples*, (Page 10 of 15) from this report. The 2011 report identified one of the missing thermoluminescent dosimeter (TLD) samples as being from location OTD-2E, which is a typographical error. The correct location is OTD-1E. For further clarification, an additional entry for July 27, 2011 has been made along with additional explanation as to when the TLDs were in the field and the quarter that the data was reported. Attachment

IE25  
IE48  
NRR

Attachment 1 contains a corrected page with revision bars in the right margin to denote the changes.

**2009 – 2011 Radiological Effluent Release Reports (References 2 – 4, Enclosure 1)**

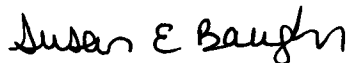
In preparation for an upcoming NRC Radiation Protection Inspection, a review of industry operating experience (OE) identified the need to correct the 2009, 2010, and 2011 Radiological Effluent Release Reports regarding the reporting of solid radioactive waste. Several plants had been notified that their annual reports contained a discrepancy in that the number of offsite shipments of solid radioactive waste did not correlate with the number of shipments recorded for burial.

This discrepancy was also determined to pertain to the annual reports submitted for Fort Calhoun Station. Therefore, in order to more accurately convey the volume, curie content, major nuclide composition, and shipments of solid radioactive waste sent offsite, Table III, *Radioactive Effluent Releases-Solid Radioactive Waste Effluent and Waste Disposal Report*, has been corrected for the years of 2009 through 2011. Attachment 2 contains corrected pages for each of these years. Revision bars in the right margin denote the location of the changes.

No commitments to the NRC are made in this letter.

Please contact Mr. Bill Hansher at (402) 533-6894 if you have any questions.

Sincerely,



S. E. Baughn  
Manager - Nuclear Licensing

SEB/RJB/MPA/mle

**Attachments:**

1. Revised Page for 2011 Annual Radiological Environmental Operating Report
2. Revised Pages for 2009 – 2011 Annual Radiological Effluent Release Reports

c: E. E. Collins, Jr., NRC Regional Administrator, Region IV  
L. E. Wilkins, NRC Project Manager  
J. C. Kirkland, NRC Senior Resident Inspector  
R. A. Oliviera, American Nuclear Insurers

**Revised Page for 2011 Annual Radiological Environmental Operating Report**

ACM	2-2	DCOM A	new available in loading
TEL		ACTD 2D	TEL missing in reference to some of the data to match 4/20/11
		11, 20, 10, 14	new added in to loading
TEL	10	2481E	TEL missing in field
		2R 10, 10, 14	TEL missing in field

**Table 3.0 Listing of Missed Samples (samples scheduled but not collected)**

<b>Sample Type</b>	<b>Date</b>	<b>Location</b>	<b>Reason</b>
<b>AP</b>	<b>5/11/2011</b>	<b>OAP K</b>	<b>Filter Damaged</b>
<b>WW</b>	<b>6/24/2011</b>	<b>OGW A</b>	<b>Inaccessible due to flooding</b>
<b>TLD</b>	<b>7/01/2011</b>	<b>OTD 2D</b>	<b>TLD missing in the field due to flooding. No data for second quarter.</b>
<b>TLD</b>	<b>7/27/2011</b>	<b>OTD 2A, 2B, 1C, 1E, &amp; 1F</b>	<b>Inaccessible due to flooding</b>
<b>TLD</b>	<b>10/11/2011</b>	<b>OTD 2A&amp;1E</b>	<b>TLD missing in field</b>
<b>TLD</b>	<b>10/11/2011</b>	<b>OTD 2B, 1C, 1D, &amp; 1F</b>	<b>In the field for both 2<sup>nd</sup> &amp; 3<sup>rd</sup> quarters. Data included in 2<sup>nd</sup> quarter results, missing for 3<sup>rd</sup> quarter.</b>

**Revised Pages for 2009 Annual  
Radiological Effluent Release Report**

III. RADIOACTIVE EFFLUENT RELEASES-SOLID RADIOACTIVE  
WASTE EFFLUENT AND WASTE DISPOSAL REPORT

January 1, 2009 through December 31, 2009

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (NOT IRRADIATED)

1. Type of Waste	Month Shipped	Number of Shipments	Volume Cu.Meter	Curie Content	Est.Total % Error
a. Spent resins, filter sludges, evaporator bottoms, etc.	January	0	0.00E+00	0.00E+00	N/A
	February	0	0.00E+00	0.00E+00	N/A
	March	0	0.00E+00	0.00E+00	N/A
	April	0	0.00E+00	0.00E+00	N/A
	May	0	0.00E+00	0.00E+00	N/A
	June	1	3.40E+00	7.58E-01	20
	July	0	0.00E+00	0.00E+00	N/A
	August	0	0.00E+00	0.00E+00	N/A
	September	0	2.69E+00	4.70E-02	20
	October	1	4.70E+00	1.73E+00	20
	November	0	0.00E+00	0.00E+00	N/A
	December	0	0.00E+00	0.00E+00	N/A
Total	(Type a)	2	1.08E+01	2.54E+00	20
b. Dry compressable, contaminated equipment, etc.	January	0	0.00E+00	0.00E+00	N/A
	February	0	0.00E+00	0.00E+00	N/A
	March	1	7.24E+01	1.70E-02	20
	April	2	1.09E+02	1.93E-02	20
	May	0	0.00E+00	0.00E+00	N/A
	June	0	0.00E+00	0.00E+00	N/A
	July	1	3.62E+01	1.88E-02	20
	August	0	0.00E+00	0.00E+00	N/A
	September	1	4.16E+01	4.02E-02	20
	October	2	3.79E+01	4.71E-01	20
	November	4	2.21E+02	1.34E-01	20
	December	3	1.50E+02	5.26E-01	20
Total	(Type b)	14	6.68E+02	1.23E+00	20

III. RADIOACTIVE EFFLUENT RELEASES-SOLID RADIOACTIVE

(Continued)					
1. Type of Waste	Month Shipped	Number of Shipments	Volume Cu.Meter	Curie Content	Est.Total % Error
c. Irradiated components and other categories.	January	0	0	0	N/A
	February	0	0	0	N/A
	March	0	0	0	N/A
	April	0	0	0	N/A
	May	0	0	0	N/A
	June	0	0	0	N/A
	July	0	0	0	N/A
	August	0	0	0	N/A
	September	0	0	0	N/A
	October	0	0	0	N/A
	November	0	0	0	N/A
	December	0	0	0	N/A
Total	(Type c)	0	0	0	N/A
d. Other	January	0	0	0	N/A
	February	0	0	0	N/A
	March	0	0	0	N/A
	April	0	0	0	N/A
	May	0	0	0	N/A
	June	0	0	0	N/A
	July	0	0	0	N/A
	August	0	0	0	N/A
	September	0	0	0	N/A
	October	0	0	0	N/A
	November	0	0	0	N/A
	December	0	0	0	N/A
Total	(Type d)	0	0	0	N/A

III. RADIOACTIVE EFFLUENT RELEASES-SOLID RADIOACTIVE

(Continued)

B. ESTIMATE OF MAJOR NUCLIDE COMPOSITION (By Type of Waste)

1. Percentage of Curies from Represented Isotopes

	Isotope	Percent	Curies	
a.	Ni-63	43.7%	1.11E+00	All other nuclides constitute less than 1%
	Co-60	23.6%	5.98E-01	
	Fe-55	10.1%	2.57E-01	
	Co-58	10.0%	2.55E-01	
	Cs-137	4.6%	1.17E-01	
	Sb-125	1.8%	4.60E-02	
	Nb-95	1.4%	3.50E-02	
	Mn-54	1.3%	3.40E-02	
	Ag-110m	1.3%	3.30E-02	
b.	Co-58	42.0%	5.14E-01	All other nuclides constitute less than 1%
	Nb-95	16.1%	1.97E-01	
	Cs-137	9.7%	1.19E-01	
	Co-60	8.2%	1.01E-01	
	Fe-55	6.4%	7.77E-02	
	Zr-95	5.3%	6.53E-02	
	Cr-51	2.7%	3.24E-02	
	Ni-63	2.1%	2.56E-02	
	Ag-110m	2.0%	2.43E-02	
	H-3	1.9%	2.43E-02	
	Mn-54	1.4%	1.77E-02	
c.	N/A	N/A	N/A	
d.	N/A	N/A	N/A	

C. SOLID WASTE (DISPOSITION)

Number of Shipments	Transportation Mode	Destination
14	Closed Sole Use Vehicle	Oak Ridge, TN
2	Closed Sole Use Vehicle	Erwin, TN

D. IRRADIATED FUEL SHIPMENTS (DISPOSITION)

Number of Shipments	Transportation Mode	Destination
N/A	N/A	N/A



**Revised Pages for 2010 Annual  
Radiological Effluent Release Report**

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WASTE EFFLUENT AND WASTE DISPOSAL REPORT

January 1, 2010 through December 31, 2010

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (NOT IRRADIATED)

1. Type of Waste	Month Shipped	Number of Shipments	Volume Cu.Meter	Curie Content	Est.Total % Error
a. Spent resins, filter sludges, evaporator bottoms, etc.	January	0	0.00E+00	0.00E+00	N/A
	February	0	0.00E+00	0.00E+00	N/A
	March	0	0.00E+00	0.00E+00	N/A
	April	1	3.40E+00	2.06E+00	20
	May	0	0.00E+00	0.00E+00	N/A
	June	0	0.00E+00	0.00E+00	N/A
	July	0	0.00E+00	0.00E+00	N/A
	August	0	0.00E+00	0.00E+00	N/A
	September	0	0.00E+00	0.00E+00	N/A
	October	0	0.00E+00	0.00E+00	N/A
	November	0	0.00E+00	0.00E+00	N/A
	December	0	0.00E+00	0.00E+00	N/A
Total (Type a)		1	3.40E+00	2.06E+00	20
b. Dry compressable, contaminated equipment, etc.	January	2	8.18E+01	6.61E-02	20
	February	1	3.62E+01	3.24E-01	20
	March	1	3.62E+01	1.85E-02	20
	April	0	0.00E+00	0.00E+00	N/A
	May	0	0.00E+00	0.00E+00	N/A
	June	0	0.00E+00	0.00E+00	N/A
	July	0	0.00E+00	0.00E+00	N/A
	August	1	3.62E+01	2.69E-03	20
	September	0	0.00E+00	0.00E+00	N/A
	October	2	1.45E+02	5.29E-02	20
	November	0	0.00E+00	0.00E+00	N/A
	December	1	4.43E+01	5.69E-03	20
Total (Type b)		8	3.79E+02	4.70E-01	20

III. RADIOACTIVE EFFLUENT RELEASES-SOLID RADIOACTIVE

(Continued)					
1. Type of Waste	Month Shipped	Number of Shipments	Volume Cu.Meter	Curie Content	Est.Total % Error
c. Irradiated components and other categories.	January	0	0	0	N/A
	February	0	0	0	N/A
	March	0	0	0	N/A
	April	0	0	0	N/A
	May	0	0	0	N/A
	June	0	0	0	N/A
	July	0	0	0	N/A
	August	0	0	0	N/A
	September	0	0	0	N/A
	October	0	0	0	N/A
	November	0	0	0	N/A
	December	0	0	0	N/A
Total	(Type c)	0	0	0	N/A
d. Other	January	0	0	0	N/A
	February	0	0	0	N/A
	March	0	0	0	N/A
	April	0	0	0	N/A
	May	0	0	0	N/A
	June	0	0	0	N/A
	July	0	0	0	N/A
	August	0	0	0	N/A
	September	0	0	0	N/A
	October	0	0	0	N/A
	November	0	0	0	N/A
	December	0	0	0	N/A
Total	(Type d)	0	0	0	N/A

III. RADIOACTIVE EFFLUENT RELEASES-SOLID RADIOACTIVE

(Continued)

B. ESTIMATE OF MAJOR NUCLIDE COMPOSITION (By Type of Waste)

1. Percentage of Curies from Represented Isotopes

	Isotope	Percent	Curies	
a.	Ni-63	39.8%	8.18E-01	All other nuclides constitute less than 1%
	Co-60	25.5%	5.24E-01	
	Fe-55	9.7%	2.00E-01	
	Nb-95	9.0%	1.86E-01	
	H-3	5.8%	1.20E-01	
	Co-58	4.6%	9.40E-02	
	Zr-95	1.6%	3.20E-02	
	Cs-137	1.4%	2.80E-02	
b.	Co-58	42.6%	2.00E-01	All other nuclides constitute less than 1%
	Nb-95	15.9%	7.47E-02	
	Cs-137	10.1%	4.76E-02	
	Co-60	7.8%	3.67E-02	
	Fe-55	6.7%	3.17E-02	
	Zr-95	5.0%	2.33E-02	
	Cr-51	2.7%	1.28E-02	
	Ni-63	2.5%	1.16E-02	
	Ag-110m	2.0%	9.37E-03	
	H-3	1.3%	6.12E-03	
	Mn-54	1.3%	6.10E-03	
	c.	N/A	N/A	
d.	N/A	N/A	N/A	

C. SOLID WASTE (DISPOSITION)

Number of Shipments	Transportation Mode	Destination
8	Closed Sole Use Vehicle	Oak Ridge, TN
1	Closed Sole Use Vehicle	Erwin, TN

D. IRRADIATED FUEL SHIPMENTS (DISPOSITION)

Number of Shipments	Transportation Mode	Destination
N/A	N/A	N/A

**Revised Pages for 2011 Annual  
Radiological Effluent Release Report**

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WASTE EFFLUENT AND WASTE DISPOSAL REPORT

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A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (NOT IRRADIATED)

1. Type of Waste	Month Shipped	Number of Shipments	Volume Cu.Meter	Curie Content	Est Total % Error
a. Spent resins, filter sludges, evaporator bottoms, etc.	January	0	0.00E+00	0.00E+00	N/A
	February	0	0.00E+00	0.00E+00	N/A
	March	0	0.00E+00	0.00E+00	N/A
	April	0	0.00E+00	0.00E+00	N/A
	May	0	0.00E+00	0.00E+00	N/A
	June	0	0.00E+00	0.00E+00	N/A
	July	0	0.00E+00	0.00E+00	N/A
	August	0	0.00E+00	0.00E+00	N/A
	September	0	0.00E+00	0.00E+00	N/A
	October	0	0.00E+00	0.00E+00	N/A
	November	0	0.00E+00	0.00E+00	N/A
	December	1	3.40E+00	2.57E+00	20
Total	(Type a)	1	3.40E+00	2.57E+00	20
b. Dry compressable, contaminated equipment, etc.	January	1	5.69E+00	1.10E-01	20
	February	0	0.00E+00	0.00E+00	N/A
	March	0	0.00E+00	0.00E+00	N/A
	April	3	1.84E+02	1.13E-01	20
	May	3	1.86E+02	1.11E-01	20
	June	2	7.50E+01	1.68E+00	20
	July	0	0.00E+00	0.00E+00	N/A
	August	0	0.00E+00	0.00E+00	N/A
	September	0	0.00E+00	0.00E+00	N/A
	October	0	0.00E+00	0.00E+00	N/A
	November	1	4.56E+01	1.14E-02	20
	December	2	7.81E+01	6.42E-01	20
Total	(Type b)	12	5.75E+02	2.67E+00	20

III. RADIOACTIVE EFFLUENT RELEASES-SOLID RADIOACTIVE

(Continued)

1. Type of Waste	Month Shipped	Number of Shipments	Volume Cu.Meter	Curie Content	Est.Total % Error
c. Irradiated components and other categories.	January	0	0	0	N/A
	February	0	0	0	N/A
	March	0	0	0	N/A
	April	0	0	0	N/A
	May	0	0	0	N/A
	June	0	0	0	N/A
	July	0	0	0	N/A
	August	0	0	0	N/A
	September	0	0	0	N/A
	October	0	0	0	N/A
	November	0	0	0	N/A
	December	0	0	0	N/A
Total	(Type c)	0	0	0	N/A
d. Other	January	0	0	0	N/A
	February	0	0	0	N/A
	March	0	0	0	N/A
	April	0	0	0	N/A
	May	0	0	0	N/A
	June	0	0	0	N/A
	July	0	0	0	N/A
	August	0	0	0	N/A
	September	0	0	0	N/A
	October	0	0	0	N/A
	November	0	0	0	N/A
	December	0	0	0	N/A
Total	(Type d)	0	0	0	N/A

III. RADIOACTIVE EFFLUENT RELEASES-SOLID RADIOACTIVE

(Continued)

B. ESTIMATE OF MAJOR NUCLIDE COMPOSITION (By Type of Waste)

1. Percentage of Curies from Represented Isotopes

	Isotope	Percent	Curies	
a.	Ni-63	67.6%	1.73E+00	All other nuclides constitute less than 1%
	Co-60	13.6%	3.47E-01	
	Fe-55	8.9%	2.27E-01	
	Cs-137	5.2%	1.34E-01	
	H-3	2.1%	5.35E-02	
	Mn-54	1.0%	2.49E-02	
b.	Co-58	43.5%	1.16E+00	All other nuclides constitute less than 1%
	Cs-137	14.7%	3.92E-01	
	Nb-95	11.7%	3.11E-01	
	Fe-55	10.3%	2.74E-01	
	Co-60	5.9%	1.57E-01	
	Ni-63	5.4%	1.45E-01	
	Ag-110m	2.2%	5.92E-02	
	Zr-95	2.0%	5.29E-02	
	Cr-91	1.8%	4.74E-02	
c.	N/A	N/A	N/A	
d.	N/A	N/A	N/A	

C. SOLID WASTE (DISPOSITION)

Number of Shipments	Transportation Mode	Destination
12	Closed Sole Use Vehicle	Oak Ridge, TN
1	Closed Sole Use Vehicle	Erwin, TN

D. IRRADIATED FUEL SHIPMENTS (DISPOSITION)

Number of Shipments	Transportation Mode	Destination
N/A	N/A	N/A