



10 CFR 50.75
10 CFR 50.82
10 CFR 72.30

March 29, 2018
LIC-18-0009

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

Fort Calhoun Station, Unit No. 1
Renewed Facility Operating License No. DPR-40
NRC Docket No. 50-285

Fort Calhoun Station
Independent Spent Fuel Storage Installation
NRC Docket No. 72-054

Subject: Fort Calhoun Station, Unit No. 1, 2018 Annual Decommissioning Funding / Irradiated Fuel Management Status Report, and 2018 Triennial Omaha Public Power District (OPPDP) Nuclear Decommissioning Funding Plan for the Fort Calhoun Station Independent Spent Fuel Storage Installation (ISFSI)

References:

1. Letter from OPPD (T. Burke) to USNRC (Document Control Desk), "Certification of Permanent Cessation of Power Operations," dated August 25, 2016 (LIC-16-0067) (ML16242A127)
2. Letter from OPPD (T. Burke) to USNRC (Document Control Desk), "Certification of Permanent Removal of Fuel from the Removal of Fuel from the Reactor Vessel," dated November 13, 2016 (LIC-16-0074) (ML16319A254)
3. Letter from OPPD (M. J. Fisher) to USNRC (Document Control Desk), "Fort Calhoun Station, Unit No. 1, Post-Shutdown Decommissioning Activities Report," dated March 31, 2017 (LIC-17-0033)(ML17089A759)
4. Letter from OPPD (M. J. Fisher) to USNRC (Document Control Desk), "Fort Calhoun Station Irradiated Fuel Management Plan," dated March 31, 2017 (LIC-17-0031) (ML17093A594)
5. Letter from USNRC (J. S. Kim) to OPPD (M. J. Fisher) "Fort Calhoun Station, Unit 1-Review of Post-Shutdown Decommissioning Activities Report (CAC NO. MF9536; EPID I-2017-LLL-0008)," dated March 23, 2018 (NRC-18-018) (ML18011A687)

In accordance with 10 CFR 50.75(f)(1), 10 CFR 50.82(a)(8)(v), 10 CFR 50.82(a)(8)(vi), and 10 CFR 50.82(a)(8)(vii), Omaha Public Power District (OPPDP) is submitting the annual status of decommissioning funding, status of funding for managing irradiated fuel, and the financial assurance status report.

In Reference 1 and 2, OPPD certified permanent cessation of power operation and permanent removal of fuel from the reactor vessel for the Fort Calhoun Station, Unit 1, (FCS). In Reference 3, OPPD submitted its Post-Shutdown Decommissioning Activities Report (PSDAR) containing a site-specific Decommissioning Cost Estimate (DCE) pursuant to 10 CFR 50.82(a)(4)(i) and 10 CFR 50.82(a)(8)(iii). In Reference 4, OPPD submitted its Irradiated Fuel Management Plan as required by 10 CFR 50.82(a)(4)(i). In Reference 5, the NRC found that the PSDAR contained the necessary information required by 10 CFR 50.82(a)(4)(i) and was consistent with the guidance of Regulatory Guide 1.185, revision 1.

Enclosure 1 provides the 2018 Annual Decommissioning Funding / Irradiated Fuel Management Status Report. In accordance with 10 CFR 72.30, Enclosure 2 provides OPPD's 2018 Triennial Nuclear Decommissioning Funding Plan (DFP) for the Fort Calhoun Station (FCS) ISFSI.

No commitments to the NRC are made in this letter.

If you should have any questions about the enclosed reports, please contact Mr. Bradley H. Blome, Director Licensing & Regulatory Assurance, at 402-533-6041.

Respectfully,

A handwritten signature in cursive script, appearing to read "Mary J. Fisher".

Mary J. Fisher
Senior Director Fort Calhoun Station Decommissioning

MJF/epm

Enclosures:

1. 2018 Annual Decommissioning Funding / Irradiated Fuel Management Status Report
 2. 2018 Triennial Omaha Public Power District (OPPD) Nuclear Decommissioning Funding Plan for the Fort Calhoun Station Independent Spent Fuel Storage Installation (ISFSI)
- c: K. M. Kennedy, NRC Regional Administrator, Region IV
J. S. Kim, NRC Project Manager
J. D. Parrott, NRC Senior Project Manager
R. S. Browder, NRC Senior Health Physicist, Region IV

ENCLOSURE 1

OMAHA PUBLIC POWER DISTRICT

FORT CALHOUN STATION UNIT NO.1

**2018 ANNUAL DECOMMISSIONING FUNDING / IRRADIATED FUEL MANAGEMENT
STATUS REPORT**

As of December 31, 2017

**OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION UNIT NO. 1
2018 ANNUAL
DECOMMISSIONING FUNDING / IRRADIATED FUEL MANAGEMENT STATUS REPORT
as of December 31, 2017**

10 CFR 50.75 (f) and 50.82(8)

As required by 10 CFR 50.75 (f) and 50.82(8), OPPD reports the following information:

A. Current Decommissioning Cost Estimate

Pursuant to 10 CFR 50.75(c), the 2018 estimated NRC minimum decommissioning amount to decommission Fort Calhoun Station Unit No 1 is **\$419,596,000**. See Attachment A for the detailed decommissioning cost calculation and Attachment B for the applicable indices. Although required by 50.75(c) OPPD does not use this calculation for any other decommissioning cost estimates or evaluations. The estimate is superseded by the requirements of 10 CFR 50.82(8). Additional reporting requirements required by 10 CFR 50.82(8) are documented in Attachment C.

As required by 10 CFR 50.82, OPPD has completed a site-specific decommissioning cost analysis. Based on the decommissioning cost analysis (completed in 2018), the total estimated cost to decommission Fort Calhoun Station Unit No. 1 is **\$1,295,453,000** in 2017 dollars. Of that total cost estimate, the current site-specific cost estimate for license termination expenses (LTE) of Fort Calhoun Station Unit No. 1 is **\$882,212,000**, the current separate estimate of site restoration is **\$47,979,000** and the current separate estimate of spent fuel management costs is **\$365,262,000**.

The total cost estimate was reported as **\$1.383 billion** (2016 dollars) in the Decommissioning Cost Estimate as required by 10 CFR 50.82(a)(8)(iii) (reference 1). The cost estimate included monies anticipated to be spent for operating license termination (radiological remediation), interim spent fuel storage and site restoration activities.

B. Current Decommissioning Fund Balance

The total OPPD Decommissioning Fund(s) balance as of December 31, 2017 was **\$421,257,000**. OPPD maintains two separate trust accounts, one for the NRC minimum decommissioning amount as outlined in 10 CFR 50.75 (c) and one for other costs including additional radiological, site restoration and spent fuel management as determined by the consultant cost study. As of December 31, 2017, the balance in the fund for the NRC minimum decommissioning amount was **\$294,458,000**. As of December 31, 2017, the balance in the funds accumulated for other decommissioning costs was **\$126,799,000**.

The two trust funds are not commingled and the funds accumulated for the additional decommissioning cost are not included as funds for the NRC minimum decommissioning amount. The funds accumulated for the additional decommissioning costs including additional radiological, site restoration and spent fuel management are available for radiological decommissioning without prior approval by a State regulatory authority and are not subject to disapproval for radiological decommissioning by a State regulatory authority.

C. Annual Decommissioning Collections

There were no annual collections for 2016. The annual collection for 2017 was \$147,469,000. The total expected future collections for decommissioning are \$838,556,000 beginning in 2018 as shown in Attachment D, Column 1. The revenue source for collections is OPPD "cost-of-service" electric rates.

D. Rates Used to Escalate Decommissioning Costs and Fund Balances

The rates used for the escalation of the site-specific decommissioning cost estimate and earnings rates on the Decommissioning Fund through the completion of decommissioning are shown in Attachment E. IHS Global Insight, Inc. provides the basis for the decommissioning cost estimate inflation and earnings rate forecasts. Decommissioning costs are inflated using a blending of the IHS Global Insight's forecasts for Consumer Price Index, All-Urban and Employment Cost Index, Total Private Compensation. Decommissioning trust earnings are projected using the IHS Global Insight's forecast for the yield on 5-year Treasury notes.

E. Contracts to Help Fund Decommissioning

OPPD does not have any contracts pursuant to 10 CFR 50.75 (e)(1)(ii)(C) and is not relying on contracts with a "non-bypassable charge" to fund decommissioning.

F. Modifications to Method of Providing Financial Assurance

There have been no modifications to OPPD's method of providing financial assurance since the decommissioning funding plan began in 1982 and continued pursuant to NRC Regulations in 1990.

G. Changes in the Decommissioning Funding Plan Trust Agreement

The Decommissioning Funding Plan Trust Agreement previously had a fund audit to cover the period July 1 through June 30. To align the Decommissioning Trust Fund audit with Omaha Public Power District's audit, the audit period for the Trust Fund was changed to January 1 through December 31. This change became effective January 1, 2018.

Additionally, the Trust Agreement previously stated Omaha Public Power District would submit to the NRC an annual accounting statement received from the Trustee on an annual basis. The Trust Agreement was changed to state that Omaha Public Power District will submit an annual accounting statement when requested by the NRC.

References:

1. Letter from OPPD (M. J. Fisher) to USNRC (Document Control Desk), "Fort Calhoun Station, Unit No. 1, Post-Shutdown Decommissioning Activities Report," dated March 31, 2017 (LIC 17 0033) (ML17089A759)
2. Letter from OPPD (M. J. Fisher) to USNRC (Document Control Desk), "Fort Calhoun Station Irradiated Fuel Management Plan," dated March 31, 2017 (LIC-17-0031) (ML17093A594)

**OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION UNIT NO. 1
2018 ANNUAL DECOMMISSIONING FUNDING STATUS REPORT TO NRC**

ATTACHMENT A

**2018 Escalation of the Minimum Decommissioning Amount (MDA) Estimate
for Fort Calhoun Station Unit No. 1
Based on Nuclear Regulatory Commission (NRC) Formulas and Application to OPPD**

The NRC accepted OPPD's Decommissioning Funding Plan in 1990. As part of the Decommissioning Funding Plan, OPPD annually calculates the MDA as follows:

NRC Formula for MDA

$\$75 \text{ million} + \$8800(P) = \text{MDA for a Pressurized Water Reactor (PWR) Plant}$

where: $P = \text{MWt reactor rating}$
 $\text{Fort Calhoun} = 1500$
 $\text{MDA expressed in 1986 Dollars (to be escalated)}$

Escalation of NRC Formula for MDA

$\text{Estimated Decommissioning Cost in Year XX} = \text{MDA} \times (0.65L + 0.13E + 0.22B)$

Where: "L" is the Labor factor. The Labor factor is obtained from the "Employment Cost Indexes", published by the U. S. Department of Labor - Bureau of Labor Statistics. Specifically, the appropriate regional data from the table entitled "Employment Cost Index for total compensation, for private industry workers, by bargaining status, census region and division, and metropolitan area status" should be used. In OPPD's case, data from the Midwest Region is to be used.

"E" is the Energy factor. The Energy factor is to be obtained from the following two component formula specifically weighted for PWR plants:

$$0.58P + 0.42F = E \text{ (Energy Factor)}$$

where: "P" is the component for electric power, and "F" is the component for fuel oil

Both "P" and "F" can be found in "Producer Price Indices", published by the U. S. Department of Labor - Bureau of Labor Statistics. "P" is to be obtained from the Industrial Electric Power Index and "F" is to be obtained from the Light Fuel Oils Index.

"B" is the Waste Burial factor. The Waste Burial factor is to be obtained from NRC report NUREG-1307, "Report on Waste Burial Charges" or its updates.

OPPD's MDA and Escalation

$$\text{MDA} = \$75 \text{ million} + \$8800(P) \text{ (where } P = 1500 \text{ MWt)}$$

$$\$75 \text{ million} + \$8800(1500)$$

$$\$75 \text{ million} + \$13.2 \text{ million} = \mathbf{\$88.2 \text{ million}} \text{ (1986 Dollars)}$$

$$\text{OPPD Escalation of MDA} = \$88.2 \text{ million} \times (0.65L + 0.13E + 0.22B)$$

Where "L", "E", and "B" =

"L" = Labor Index Change

Employment Cost Index - Private Industry Workers - Total Compensation

Midwest Region (Quarterly Basis Increase)

12-2005 Base L _x	2.08
12-2017 ECI	128.5

$$L_x = 2.08 \times (128.5/100) = 2.67\% \text{ increase}$$

"E" = Energy Index Change

$$\begin{aligned} \text{Energy Index Change} = & (\text{Electric Power Index Change} \times 58\%) + \\ & (\text{Light Fuel Oils Index Change} \times 42\%) \end{aligned}$$

Producers Price Indices

$$\begin{array}{ll} \text{Industrial Electric Power} & \frac{12-2017 \quad 240.8}{1-1986 \quad 114.2} = 110.9\% \text{ increase} \end{array}$$

$$\begin{array}{ll} \text{Light Fuel Oils} & \frac{12-2017 \quad 178.0}{1-1986 \quad 82.0} = 117.1\% \text{ increase} \end{array}$$

Application of the formula to 12-2017 leads to

$$\text{Energy} = ((240.8/114.2) \times .58) + ((178.0/82.0) \times .42)$$

$$\text{Energy} = 1.223 + 0.912$$

$$\text{Energy} = 2.14 \text{ (an increase of 114.0\%)}$$

"B" = Waste Burial Index Change

NUREG-1307 (Revision 16)

The Waste Burial escalation factor is found in Nuclear Regulation NUREG-1307 and its updates. OPPD's Biennial Decommissioning Funding Status Report will use the Generic LLW Disposal Site Index in calculating the NRC Minimum Decommissioning Amount.

$$\begin{array}{ll} \text{Generic LLW Disposal Site Index} & \frac{3-17 \quad 12.471}{1-86 \quad 1.00} = 12.471 \text{ (an increase of 1147.1\%)} \\ \text{(Waste Vendor Index)} & \end{array}$$

The escalated cost formula is as follows:

Generic LLW Disposal Site Index

$\$88.2 \text{ million} \times (0.65(2.67) + 0.13(2.14) + 0.22(12.471)) = \textbf{\$419.596 million}$

In summary, OPPD's Fort Calhoun Station Unit No. 1 NRC Minimum Decommissioning Amount estimate escalated to 2017 is **\$419,596,000**.

**OMAHA PUBLIC POWER DISTRICT
 FORT CALHOUN STATION UNIT NO. 1
 2018 ANNUAL DECOMMISSIONING FUNDING STATUS REPORT TO NRC**

ATTACHMENT B

U. S. Department of Labor Bureau of Labor Statistics

Employment Cost Index	
Series ID:	CIU2010000000230I (B) Not seasonally adjusted
Series Title:	Total compensation for private industry workers in Midwest, Index
Ownership:	Private industry workers
Component:	Total compensation
Occupation:	All workers
Industry:	All workers
Subcategory:	All workers
Area:	Midwest Region
Periodicity:	Index number
Qtr 4 2017	128.5

Producer Price Index - Commodities	
Series ID:	WPU0543 Not seasonally adjusted
Group:	Fuels & related products & power
Item:	Industrial electric power
Base Date:	198200
2017 Ann Avg	240.8(P)

Series ID:	WPU0573 Not seasonally adjusted
Group:	Fuels & related products & power
Item:	Light fuel oils
Base Date:	198200
2017 Ann Avg	178.0(P)

U.S. NRC - Report on Waste Burial Charges NUREG-1307, Rev. 16 Published: March 2017	
Values for Generic LLW Disposal Site Direct Disposal with Vendors - PWR	
2016	12.471

Decommissioning Funding Status Report
 OMAHA PUBLIC POWER DISTRICT

ATTACHMENT C

Summary Information as of December 31, 2017
 10 CFR 50.82 (a) (8) (v)-(vii)

Decommissioning Trust Fund Balances 50.75(f)(1) 50.82(a)(8)(v)(A)

Year	Type of Trust	Fund Balance	Comments
2017	Decommissioning Trust '90 Plan	\$ 294,458,649	As of 12/31/17
2017	Decommissioning Suppl '92 Plan	\$ 126,798,726	As of 12/31/17
		\$ 421,257,375	

Other Financial Assurance Methods Being Relied Upon 50.75(f)(1)

NONE

Prior Years Decommissioning Expenditures 50.82(a)(8)(v)(A)

Year	Decom Expenditures	Spent Fuel	Total	Comments
2016	\$ 574,826	\$ -	\$ 574,826	2016 Cost in as Spent Dollars
2017	\$ 115,251,711	\$ 4,475,227	\$ 119,726,938	2017 Cost in 2017 Dollars
	\$ 115,826,537	\$ 4,475,227	\$ 120,301,764	

Prior Year Expenditures Variance to Estimated Cost 50.82(a)(8)(v)(B)

Year	Decom Expenditures	Spent Fuel	Total	Comments
2017 Estimated	\$ 135,676,000	\$ 26,311,758	\$ 161,987,758	
2017 Actual	\$ 115,251,711	\$ 4,475,227	\$ 119,726,938	
	\$ (20,424,289)	\$ (21,836,531)	\$ (42,260,820)	

Variance: License Termination and Spent Fuel Management due to timing of activities.

Remaining Decommissioning Estimated Cost 50.82(a)(8)(v)(B) / (vii)(B)

Year	Decom Expenditures	Spent Fuel	Total	Comments
2018	\$ 930,191,000	\$ 365,262,000	\$ 1,295,453,000	Estimated in 2017 Dollars

Decommissioning Criteria Upon Which the Estimate is Based 50.75(f)(1) 50.82(a)(8)(v)(B)

SAFSTOR

Any Modification to Method of Providing Financial Assurance 50.75(f)(1) 50.82(a)(8)(v)(C)

NONE

Any Material Changes to Trust Agreement Since Previous Report 50.75(f)(1) 50.82(a)(8)(v)(D)

No material changes. See Section G.

Need for Additional Financial Assurance 50.75(f)(1) 50.82(a)(8)(vi) (vii)(C)

See Attachment D, Column 1, Annual Decommissioning Fund Collections

OMAHA PUBLIC POWER DISTRICT
 FORT CALHOUN STATION UNIT NO. 1
 2018 ANNUAL DECOMMISSIONING FUNDING STATUS REPORT

ATTACHMENT D

Decommissioning Fund Annual Collections, Earnings, Expenditures and Balances

Year	Column 1 Total Annual Decommissioning Fund Collections		Column 2 Earnings on Trust Funds		Column 3 License Termination Expenditures		Column 4 Spent Fuel Management Expenditures		Column 5 Site Restoration Expenditures		Column 6 Decommissioning Trust Fund Balance ²		Column 7 Supplemental Decommissioning Trust Fund Balance ³	
2017 ¹	\$	-									\$	294,458,649		\$126,798,726
2018	\$	156,000,000	\$	12,737,491	\$	66,797,768	\$	34,050,302	\$	-	\$	301,867,293		\$187,279,503
2019	\$	143,000,000	\$	17,397,720	\$	62,123,139	\$	45,959,269	\$	-	\$	311,167,234		\$230,294,874
2020	\$	150,000,000	\$	20,308,672	\$	64,323,667	\$	47,587,121	\$	-	\$	321,276,353		\$278,583,639
2021	\$	155,000,000	\$	24,340,819	\$	6,781,302	\$	7,628,119	\$	-	\$	667,172,331		\$107,619,060
2022	\$	150,000,000	\$	29,586,317	\$	7,010,487	\$	7,885,924	\$	-	\$	673,396,973		\$256,084,323
2023	\$	84,556,000	\$	33,118,066	\$	7,246,250	\$	8,151,128	\$	-	\$	689,159,250		\$342,598,734
2024	\$	-	\$	34,570,315	\$	7,505,011	\$	8,439,715	\$	-	\$	704,798,466		\$345,585,107
2025	\$	-	\$	34,680,357	\$	7,723,181	\$	8,687,616	\$	-	\$	720,400,223		\$348,252,911
2026	\$	-	\$	34,839,606	\$	7,959,326	\$	8,953,250	\$	-	\$	735,983,515		\$350,596,648
2027	\$	-	\$	35,522,612	\$	8,193,149	\$	9,216,271	\$	-	\$	751,910,532		\$352,782,822
2028	\$	-	\$	36,111,671	\$	8,451,793	\$	9,504,413	\$	-	\$	768,100,307		\$354,748,513
2029	\$	-	\$	36,697,899	\$	8,670,731	\$	9,753,491	\$	-	\$	784,598,079		\$356,524,418
2030	\$	-	\$	37,291,527	\$	8,914,479	\$	10,027,677	\$	-	\$	801,391,730		\$358,080,136
2031	\$	-	\$	37,887,567	\$	9,160,984	\$	10,304,965	\$	-	\$	818,488,220		\$359,405,264
2032	\$	-	\$	38,485,034	\$	9,435,948	\$	10,611,138	\$	-	\$	835,868,594		\$360,462,839
2033	\$	-	\$	39,084,572	\$	9,664,516	\$	10,871,375	\$	-	\$	853,589,374		\$361,290,740
2034	\$	-	\$	39,686,775	\$	9,922,251	\$	11,161,295	\$	-	\$	871,632,120		\$361,851,223
2035	\$	-	\$	40,290,679	\$	10,183,683	\$	11,455,374	\$	-	\$	890,003,708		\$362,131,257
2036	\$	-	\$	40,878,650	\$	10,476,542	\$	12,780,339	\$	-	\$	908,683,012		\$361,073,723
2037	\$	-	\$	41,495,390	\$	9,398,889	\$	11,669,307	\$	-	\$	929,073,256		\$361,110,673
2038	\$	-	\$	42,176,995	\$	9,638,615	\$	10,916,088	\$	-	\$	949,891,750		\$361,914,471
2039	\$	-	\$	42,872,009	\$	9,884,603	\$	11,732,578	\$	-	\$	971,146,237		\$361,914,814
2040	\$	-	\$	43,553,187	\$	10,167,696	\$	12,616,400	\$	-	\$	992,813,362		\$361,016,780
2041	\$	-	\$	44,247,687	\$	10,396,787	\$	11,774,746	\$	-	\$	1,014,961,621		\$360,944,675
2042	\$	-	\$	44,965,805	\$	10,664,094	\$	12,077,481	\$	-	\$	1,037,568,047		\$360,562,479
2043	\$	-	\$	45,688,501	\$	10,939,800	\$	12,389,729	\$	-	\$	1,060,639,196		\$359,850,301
2044	\$	-	\$	46,414,169	\$	11,257,916	\$	12,745,494	\$	-	\$	1,084,147,235		\$358,753,022
2045	\$	-	\$	47,143,556	\$	11,514,945	\$	13,041,101	\$	-	\$	1,108,168,665		\$357,319,101
2046	\$	-	\$	47,877,424	\$	11,812,597	\$	13,378,203	\$	-	\$	1,132,679,118		\$355,495,272
2047	\$	-	\$	48,603,448	\$	12,116,910	\$	14,382,225	\$	-	\$	1,157,687,931		\$352,590,774
2048	\$	-	\$	49,319,388	\$	12,466,769	\$	14,790,443	\$	-	\$	1,183,165,256		\$349,175,624
2049	\$	-	\$	50,047,262	\$	12,749,257	\$	14,439,005	\$	-	\$	1,209,194,781		\$346,005,099
2050	\$	-	\$	50,765,502	\$	13,077,700	\$	16,236,780	\$	-	\$	1,235,748,202		\$340,902,700
2051	\$	-	\$	51,484,032	\$	13,414,604	\$	15,192,535	\$	-	\$	1,262,834,183		\$336,693,612
2052	\$	-	\$	52,236,756	\$	13,801,932	\$	14,874,256	\$	-	\$	1,290,419,018		\$332,669,345
2053	\$	-	\$	52,977,032	\$	14,114,674	\$	16,753,481	\$	-	\$	1,318,594,962		\$326,602,278
2054	\$	-	\$	53,692,483	\$	14,478,292	\$	17,185,079	\$	-	\$	1,347,329,778		\$319,896,574
2055	\$	-	\$	54,404,968	\$	14,851,278	\$	17,627,797	\$	-	\$	1,376,632,361		\$312,519,884
2056	\$	-	\$	55,112,183	\$	15,280,089	\$	18,128,135	\$	-	\$	1,406,464,676		\$304,391,528
2057	\$	-	\$	55,800,716	\$	15,626,324	\$	19,401,056	\$	-	\$	1,436,928,116		\$294,701,425
2058	\$	-	\$	56,469,891	\$	16,028,885	\$	19,931,253	\$	-	\$	1,467,986,223		\$284,153,071
2059	\$	-	\$	54,971,835	\$	165,584,123	\$	-	\$	2,316,320	\$	1,348,048,403		\$291,162,282
2060	\$	-	\$	48,663,482	\$	320,544,678	\$	-	\$	4,368,244	\$	1,066,644,510		\$296,316,736
2061	\$	-	\$	38,786,842	\$	367,125,249	\$	-	\$	4,726,794	\$	728,619,459		\$301,276,587
2062	\$	-	\$	29,820,666	\$	241,755,264	\$	-	\$	8,145,992	\$	506,891,112		\$302,924,345
2063	\$	-	\$	22,462,277	\$	247,983,299	\$	-	\$	8,355,846	\$	271,525,498		\$304,413,089
2064	\$	-	\$	15,300,078	\$	217,240,934	\$	-	\$	6,036,241	\$	59,652,773		\$308,308,717
2065	\$	-	\$	10,315,373	\$	59,905,583	\$	-	\$	49,951,582	\$	725,894		\$267,693,805
2066	\$	-	\$	7,354,897	\$	577,387	\$	-	\$	89,874,910	\$	162,914		\$185,159,385
	\$	838,556,000			\$	2,224,943,380	\$	604,311,949	\$	173,775,928				

¹ Annual Decommissioning Fund Collections for 2017 were \$147,469,000 with Decommissioning Expenditures of \$119,727,000.

² In 2021, a lump sum of \$324,350,000 will be transferred from the Decommissioning Supplemental Trust to fund the Decommissioning Trust.

³ All collections and expenditures flow through the Decommissioning Supplemental Trust through 2023.

OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION UNIT NO. 1
2018 ANNUAL DECOMMISSIONING FUNDING STATUS REPORT TO NRC

ATTACHMENT E

Decommissioning Funds
Annual Inflation and Earning Rates

Year	Inflation Rate	Earnings Rate
2018	2.67%	2.84%
2019	2.90%	3.43%
2020	3.26%	3.62%
2021	3.36%	3.63%
2022	3.38%	3.55%
2023	3.36%	3.44%
2024	3.30%	3.38%
2025	3.18%	3.33%
2026	3.06%	3.29%
2027	2.94%	3.30%
2028	2.88%	3.30%
2029	2.86%	3.30%
2030	2.81%	3.30%
2031	2.77%	3.30%
2032	2.73%	3.30%
2033	2.69%	3.30%
2034	2.67%	3.30%
2035	2.63%	3.30%
2036	2.60%	3.30%
2037	2.57%	3.30%
2038	2.55%	3.30%
2039	2.55%	3.30%
2040	2.55%	3.30%
2041	2.56%	3.30%
2042	2.57%	3.30%
2043	2.59%	3.30%
2044	2.60%	3.30%
2045	2.59%	3.30%
2046-2066	2.58%	3.30%

ENCLOSURE 2

FORT CALHOUN STATION UNIT NO.1

2018 TRIENNIAL OMAHA PUBLIC POWER DISTRICT (OPPD)

NUCLEAR DECOMMISSIONING FUNDING PLAN FOR THE

FORT CALHOUN STATION

INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI)

**Omaha Public Power District
(OPPD)
Nuclear Decommissioning Funding Plan (DFP)
for the Fort Calhoun Station (FCS)**

Independent Spent Fuel Storage Installation (ISFSI)

The U.S. Nuclear Regulatory Commission (NRC) published the Decommissioning Planning final rule in the Federal Register on June 17, 2011 (76 FR 35512) which adds reporting requirements for a DFP for holders and applicants of both general and specific licenses under 10 CFR part 72. This rule was effective December 17, 2012. OPPD provides the following information required by 10 CFR 72.30(b) to be included in the DFP:

Requirement 1:

(1) Information on how reasonable assurance will be provided that funds will be available to decommission the ISFSI or MRS.

Information for Requirement 1:

Pursuant to 10 CFR 72.30(e)(5), since OPPD is a reactor licensee under 10 CFR 50, OPPD utilizes the method of 10 CFR 50.75(b) and (e) to provide financial assurance for decommissioning at FCS (external sinking fund).

Requirement 2:

- (2) A detailed cost estimate for decommissioning, in an amount reflecting:
- (i) The cost of an independent contractor to perform all decommissioning activities;
 - (ii) An adequate contingency factor; and
 - (iii) The cost of meeting the § 20.1402 of this chapter criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of § 20.1403 of the chapter, the cost estimate may be based on meeting the § 20.1403 criteria.

Information for Requirement 2:

In Reference 1, OPPD submitted its Post-Shutdown Decommissioning Activities Report (PSDAR) containing a site-specific Decommissioning Cost Estimate (DCE) pursuant to 10 CFR 50.82(a)(4)(i) and 10 CFR 50.82(a)(8)(iii). In Reference 2, the NRC found that the PSDAR contained the necessary information required by 10 CFR 50.82(a)(4)(i) and was consistent with the guidance of Regulatory Guide 1.185, revision 1.

The cost estimate for decommissioning the ISFSI reflects: 1) the cost of an independent contractor performing the decommissioning activities; 2) an adequate contingency factor; and 3) the cost of meeting the criteria for unrestricted use. The cost of the disposition of this material, as well as the demolition of the ISFSI facility, is included in the estimate. The cost summary for decommissioning the ISFSI is presented in Attachment A.

Requirement 3:

- (3) Identification of and justification for using the key assumptions contained in the DCE.

Information for Requirement 3:

The ISFSI decommissioning costs were updated for the Fort Calhoun Station and prepared in February 2018. There are no additional key assumptions other than discussed in Requirement 2 above. The cost summary for decommissioning the ISFSI is presented in Attachment A.

Requirement 4:

- (4) A description of the method of assuring funds for decommissioning from paragraph (e) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility.

Information for Requirement 4:

As indicated in the information for Requirement 1, OPPD utilizes the method of 10 CFR 50.75(b) and (e) to provide financial assurance for decommissioning the Fort Calhoun Station. OPPD adjusts the amount of financial assurance required by 10 CFR 50.75(b) annually in accordance with paragraph (2) of that section, and further adjustment is required by 10 CFR 50.75(f) annually as the FCS is decommissioning per 10 CFR 50.82.

In addition, OPPD is an electric utility and, as such, can rely solely on the external sinking fund in accordance with 10 CFR 72.30(e)(5). Cost estimates will be adjusted annually and plans submitted to NRC as required by 10 CFR 72.30(c). Per Nebraska State code OPPD is a rate setting authority and funding levels are periodically adjusted through rate recovery.

Requirement 5:

- (5) The volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination.

Information for Requirement 5:

There is no known subsurface material containing residual radioactivity in the proximity of the ISFSI that will require remediation to meet the criteria for license termination.

Requirement 6:

- (6) A certification that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning.

Information for Requirement 6:

In accordance with 10 CFR 72.30(b), financial assurance, for decommissioning, has been provided in an amount that meets or exceeds the requirements of 10 CFR 50.75(b). As demonstrated in Requirement 4, this provides the requisite financial assurance for the ISFSI decommissioning cost.

10 CFR 72.30(c)(1)-(4) requires the following additional information:

Requirement 1:

(1) spills of radioactive material producing additional residual radioactivity in onsite subsurface material,

Information for Requirement (1)

1. No spills of radioactive material producing additional residual radioactivity in onsite subsurface material have occurred.

Requirement (2):

(2) facility modifications,

Information for Requirement (2):

2. Facility modifications that affected the ISFSI, including those that were implemented within the licensed area, were assessed and had no impact.

Requirement 3:

(3) changes in authorized possession limits,

Information for Requirement (3):

3. There were no changes in authorized possession limits.

Requirement 4:

(4) actual remediation costs that exceed the previous cost estimate.

Information for Requirement (4):

4. No active decommissioning of the ISFSI has occurred. Thus, there have not been any actual remediation costs that exceed the previous cost estimate.

REFERENCES:

1. Letter from OPPD (M. J. Fisher) to USNRC (Document Control Desk), "Fort Calhoun Station, Unit No. 1, Post-Shutdown Decommissioning Activities Report," dated March 31, 2017 (LIC-17-0033)(ML17089A759)
2. Letter from USNRC (J. S. Kim) to OPPD (M. J. Fisher) "Fort Calhoun Station, Unit 1-Review of Post-Shutdown Decommissioning Activities Report (CAC NO. MF9536; EPID I-2017-LLL-0008)," dated March 23, 2018 (NRC-18-018) (ML18011A687)

U.S. Nuclear Regulatory Commission
 LIC-18-0009
 Enclosure 2
 Attachment A

OMAHA PUBLIC POWER DISTRICT
 ISFSI Decommissioning Cost Estimate

Attachment A

(thousands of 2017 dollars)

Activity Description	Removal Costs	Packaging Costs	Transport Costs	LLRW Disposal Costs	Other Costs	Total Costs	Burial Volume Class A (cubic feet)	Craft Manhours	Oversight and Contractor Manhours
Decommissioning Contractor									
Planning (characterization, specs and procedures)	-	-	-	-	186	186	-	-	1,000
Decontamination (activated disposition)	34	96	362	2,721	-	3,213	13,829	212	-
License Termination (radiological surveys)	-	-	-	-	724	724	-	5,327	-
Subtotal	34	96	362	2,721	910	4,122	13,829	5,539	1,000
Supporting Costs									
NRC and NRC Contractor Fees and Costs	-	-	-	-	352	352	-	-	776
Insurance					137	137	-	-	-
Property taxes					7	7	-	-	-
Corporate A&G					224	224	-	-	-
Non-Labor Overhead					146	146	-	-	-
Security Staff Costs					219	219	-	-	4,958
Oversight Staff Costs					258	258	-	-	3,761
Subtotal	-	-	-	-	1,343	1,343	-	-	9,495
Total (w/o contingency)	34	96	362	2,721	2,252	5,465	13,829	5,539	10,495
Total (w/25% contingency)	43	120	452	3,401	2,815	6,831			

The application of contingency (25%) is consistent with the evaluation criteria referenced by the NRC in NUREG-1757 ("Consolidated Decommissioning Guidance, Financial Assurance, Recordkeeping, and Timeliness," U.S. NRC's Office of Nuclear Material Safety and Safeguards, NUREG-1757, Vol.3, Rev. 1, February 2012)