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Omaha, NE 68102-2247

May 13, 2011
LIC-11-0050

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

- References:
1. Docket No. 50-285
 2. Letter from OPPD (S. E. Baughn) to NRC (Document Control Desk), "Fort Calhoun Station, Unit No.1, 2011 Biennial Decommissioning Funding Status Report," dated March 16, 2011 (LIC-11-0028) (ML110750572)
 3. Email from NRC (L. Wilkins) to OPPD (B. R. Hansher), "DRAFT RAIs for Fort Calhoun Station Re: 2011 Decommissioning Funding Status Report (ME5485)," dated April 4, 2011 (NRC-11-0039) (ML110940487)

**SUBJECT: Response to NRC Request for Additional Information (RAI)
Regarding 2011 Biennial Decommissioning Funding Status Report**

In Reference 2, the Omaha Public Power District (OPPD) submitted the Fort Calhoun Station, Unit No. 1, Biennial Decommissioning Funding Status Report for 2011. In Reference 3, the NRC requested additional information regarding the Reference 2 submittal; the OPPD response is attached.

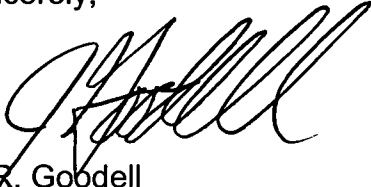
A teleconference between the NRC and OPPD was held on April 14, 2011, to review the questions and as a result, the allotted response time (30 days) was adjusted accordingly.

No commitments to the NRC are contained in this submittal.

ADD
NRC

If you have any questions regarding this submittal, please contact Mr. Bill Hansher at (402) 533-6894.

Sincerely,



J. R. Goodell
Division Manager-Nuclear Performance Improvement & Support

JRG/KRD/mle

Attachment: OPPD Response to NRC Request for Additional Information

- Enclosures:
1. 2011 Biennial Decommissioning Funding Status Report (Revised)
 2. 2008 Site-Specific Decommissioning Cost Study
 3. Escalation of Site-Specific Cost Estimate – Dismantlement Period
 4. Fort Calhoun Station Unit No.1 Decommissioning Fund Trust Agreement
 5. 1992 Supplemental Plan Trust Agreement
 6. Board Resolutions Approving Trust Agreements
 7. OPPD 2011 Corporate Operating Plan O&M Expense Information
 8. Board Resolution Approving the Corporate Operating Plan
 9. 2010 Global Insight Forecast Rates

- c:
- E. E. Collins, Jr., NRC Regional Administrator, Region IV (w/o Enclosures)
 - L. E. Wilkins, NRC Project Manager (w/o Enclosures)
 - J. C. Kirkland, NRC Senior Resident Inspector (w/o Enclosures)

OPPD Response to NRC Request for Additional Information

REQUEST FOR ADDITIONAL INFORMATION
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
2011 DECOMMISSIONING FUNDING STATUS REPORT
FOR FORT CALHOUN STATION, UNIT 1

The requests for additional information (RAIs) provided are in response to the Omaha Public Power District (OPPD) 2011 Decommissioning Funding Status (DFS) report. On March 16, 2011, OPPD submitted to the Nuclear Regulatory Commission (NRC) the 2011 DFS report for the Fort Calhoun Station, Unit 1, as required under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50.75(f)(1). OPPD should provide a response to all RAIs within 30 days from the date of this letter.

RAI #1: Current Decommissioning Cost Estimate

Please provide an explanation as to the differences between OPPD's calculation and the NRC staff's calculation of the amount of decommissioning funds estimated to be required under 10 CFR 50.75(b) and (c) and, if necessary, a corrected submittal for that part of the DFS report. In OPPD's submission, the amount of decommissioning funds estimated to be required under 10 CFR 50.75(b) and (c) differs from the amount calculated by the NRC staff. For determining the Labor Index (Lx), OPPD should follow the formula provided on page 8 of NUREG-1307, Rev. 14. According to 10 CFR 50.75(f)(1), the amount provided in the DFS report should be "the amount of decommissioning funds estimated to be required under 10 CFR 50.75(b) and (c)".

OPPD Response

In the previous report, the Labor Index (Lx) was determined using a "rebased" index for 1986, which provided a slightly lower factor than the NUREG-1307 Rev. 14 table. The 2011 Biennial Decommissioning Funding Status Report was revised using the formula provided on page 8 of NUREG-1307, Rev. 14 (Enclosure 1). Revision bars in the right margin denote the location of revised text.

RAI # 2: Current Decommissioning Cost Estimate

Please provide the dismantlement period for the site-specific cost estimate. If the site-specific cost estimate is for a longer period of time (e.g. SAFSTOR), then the licensee must provide all expenses for the decommissioning period. Within the DFS report, OPPD provided a site-specific cost estimate for the amount of decommissioning funds estimated to be required. Pursuant to 10 CFR 50.75(e)(1)(ii), unless provided otherwise, the NRC staff assumes the site-specific cost estimate is for an immediate dismantlement decommissioning period.

Also, the NRC staff requests that the licensee provide the site-specific cost estimate to the NRC. The NRC requires an annual schedule of expenses for radiological decommissioning, including the costs to maintain the facility in a safe condition, in order to evaluate the amount of earnings credit available during the decommissioning period. Finally, while providing the site-specific cost estimate in relation to the costs, OPPD did not state the current year dollars for the estimate. Therefore, OPPD should provide the site-specific cost estimate in current year dollars. If the site-specific cost estimate is from a year previous to 2010, then OPPD should escalate the site-specific cost estimate to 2010 and should provide the cost escalation factor(s) used to escalate the site-specific cost estimate.

OPPD Response

A copy of the 2008 site-specific decommissioning cost study (in 2007 dollars) for the Fort Calhoun Station prepared by TLG Services, Inc. is enclosed (Enclosure 2).

The Renewed Facility Operating License for Fort Calhoun Station expires August 9, 2033. The dismantlement period for the site-specific cost estimate begins in 2033 and lasts through 2041 with a final charge for license termination in 2058. Table 3.2 of the enclosed TLG study details the annual schedule of costs for the years 2033 – 2041 and 2058 in 2007 dollars and Enclosure 3 details the annual costs for those years in 2010 dollars.

The formula used to escalate site-specific cost estimate to 2010 is 84.4% labor, 2.4% energy, 11.2% waste burial and 2.0% other as provided to the District by TLG in Table D-3 of Enclosure 2. The index for each component is escalated from 2007 to 2010 leading to the following formula:

$$.844(0.05698) + .024(1.013) + .112(0.24392) + .02(0.04351) = .10059$$

The indices used are as follows:

- Labor – CIU201000000230I (B), Total compensation, private industry, Midwest
- Energy – WPU0543, Fuels & related products & power, industrial electric power
WPU0573, Fuels & related products & power, light fuel oils
- Burial – from NUREG-1307 Rev. 14 Table 2.1 Values for Generic LLW Disposal Site
for PWR
- Other – CUUR0000SA0, U.S. city average, all items

Applying this formula with rounding to the annual costs in Table 3.2 of Enclosure 2 leads to the results provided in Enclosure 3.

RAI #3: Current Decommissioning Fund Balance

Please provide the trust agreements for both trust accounts: the NRC minimum decommissioning amount outlined in 10 CFR 50.75(c) and the one for other costs. Please provide an explanation as to how the trust account for other costs is managed (e.g. external sinking fund). Specifically, whether the trust fund for other costs is intended to provide an assurance method pursuant to 10 CFR 50.75(e)(1). Also, please provide the information that allows funds accumulated in the trust account for other costs to be 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.

Within the OPPD's 2011 DFS report, OPPD states that it:

maintains two separate trust accounts, one for the NRC minimum decommissioning amount 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 cost study. [. . .] The two trust funds are not commingled. 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.

Pursuant to 10 CFR 50.75(e)(1), financial assurance is to be provided by the methods listed under 10 CFR 50.75(e)(1).

OPPD Response

Copies of the Omaha Public Power District, Fort Calhoun Station, Unit No. 1, Decommissioning Fund trust agreement (Enclosure 4) and the 1992 Supplemental Plan trust agreement (Enclosure 5), used for other costs are enclosed. The Board Resolutions (Enclosure 6) approving the trust agreements are also enclosed. Both trust funds have been established as external sinking funds. TLG Engineering estimates that OPPD will incur additional costs beyond those described in the Decommissioning Fund trust agreement to decommission the radiological and non-radiological areas at Fort Calhoun Station, Unit No.1.

As such, although the Decommissioning Fund trust agreement alone meets NRC regulations for financial assurance, the 1992 Supplemental Plan trust agreement was developed to ensure that funds are available to cover the additional costs identified by TLG Engineering.

Section 5 of the 1992 Supplemental Plan trust agreement states that the District can make withdrawals for radiological decommissioning or other decommissioning needs as determined solely by the Omaha Public Power District. As such, a State regulatory

authority is not required to approve nor can it disapprove the use of these funds for decommissioning Fort Calhoun Station, Unit No. 1.

To clarify this matter within the report itself, a statement was added to Section B of the 2011 Biennial Decommissioning Funding Status Report indicating that the funds of the 1992 Supplemental Plan are not included as funds for the NRC minimum decommissioning amount.

RAI #4: Rates Used to Escalate Decommissioning Cost and Fund Balances

Please provide the State regulatory authority that allows OPPD's Board of Directors to determine the inflation rates and the earnings rates of OPPD. Also, the NRC requests the OPPD Board of Directors determination that allows for the assumption of the stated rates. Within the DFS report, OPPD states that OPPD is allowed to assume rates used regarding the rate of escalation in decommissioning costs, rates of earnings on decommissioning funds and rates of other actors used in funding projections. OPPD also states that the rates are provided by OPPD's Board of Directors. According to 10 CFR 50.75(f)(1):

the information in [the DFS] report must include [. . .] the assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections. . .

Enclosure C of your March 16, 2011, submittal provides a variable inflation rate and earnings rate with the annual collection next to it. Please confirm that the earnings rates are allowed by a regulatory authority over OPPD for both the annual collections as well as the decommissioning trust fund.

OPPD Response

Nebraska State Statutes provide the regulatory authority that allows OPPD's Board of Directors to establish the inflation rates and earning rates of OPPD. The District's Corporate Operating Plan indicates that Global Insight is the source for the inflation rates and earnings rates used in decommissioning funding projections. OPPD's Board of Directors approved the District's Corporate Operating Plan.

Following are the links to the Nebraska State Statutes establishing OPPD's Board power and authority to set reasonable rates:

<http://uniweb.legislature.ne.gov/laws/statutes.php?statute=70-655>

<http://uniweb.legislature.ne.gov/laws/statutes.php?statute=70-619>

A copy of the OPPD 2011 Corporate Operating Plan – Operation & Maintenance Expense information (Enclosure 7), which includes the statement regarding inflation and

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earnings rates used for the decommissioning cost and fund balances and a copy of the Board Resolution (Enclosure 8) approving the Corporate Operating Plan is enclosed.

A copy of the 2010 Global Insight Forecast Rates (Enclosure 9) is enclosed.

2011 Biennial Decommissioning Funding Status Report (Revised)

**OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION UNIT NO. 1
2011 BIENNIAL DECOMMISSIONING FUNDING STATUS REPORT
REVISED as of May 9, 2011**

Based on Nuclear Regulatory Commission (NRC)
Regulation 10 CFR 50.75 (f)

The NRC requires that Omaha Public Power District (OPPD) report by March 31, 2011 and at least once every two years thereafter on the status of its decommissioning funding for Fort Calhoun Station Unit No. 1. Based on the decommissioning funding requirement as outlined in 10 CFR 50.75 (f), OPPD reports the following information:

A. Current Decommissioning Cost Estimate

Pursuant to 10 CFR 50.75 (c), the January 2011 estimated NRC minimum decommissioning amount to decommission Fort Calhoun Station Unit No. 1 is **\$396,948,000**. See Attachment A for detailed decommissioning cost calculation and Attachment B for the applicable indices.

In addition to the minimum NRC decommissioning amount calculation, OPPD employs a consultant to complete a decommissioning cost update every five years. Based on the escalation of the consultant's most recent study, the total estimated cost to decommission Fort Calhoun Station Unit No. 1 is **\$717,593,000** in 2010 dollars. Of that total cost estimate, the current site-specific cost estimate for radiological decommissioning of Fort Calhoun Station Unit No. 1 is **\$477,199,000**, the current separate estimate of site restoration (State costs) is **\$31,574,000** and the current separate estimate of spent fuel management costs is **\$208,820,000**.

The total cost estimate was reported as \$809,200,000 in the 2009 Biennial Decommissioning Funding Status report. The total cost estimate should have been reported as \$687,484,000. The overstatement was a result of misapplied indices.

B. Current Decommissioning Fund Balance

The total OPPD Decommissioning Fund balance as of December 31, 2010 was **\$321,188,300**. 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 cost study. As of December 31, 2010, the balance in the fund for the NRC minimum decommissioning amount was **\$246,125,500**. As of December 31, 2010, the balance in the funds accumulated for other decommissioning costs was **\$75,062,800**. This balance is allocated as follows: **\$18,765,700** for additional radiological costs, **\$7,506,300** for site restoration costs and **\$48,790,800** for spent fuel management costs.

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 was no annual collection for 2009 or 2010 as shown in Attachment C. The revenue source for any collections is "cost-of-service" electric rates.

D. Rates Used to Escalate Decommissioning Costs and Fund Balances

The rates used for the escalation of the decommissioning cost estimate and earnings rates on the Decommissioning Fund are shown in Attachment B. Global Insight, Inc. of Waltham, Massachusetts provides the decommissioning cost estimate inflation and earnings rates forecasts. OPPD's Board of Directors approved both the inflation rates and earnings rates in December 2010 as part of OPPD's Corporate Operating Plan.

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

There have been no changes to OPPD's Decommissioning Funding Plan Trust Agreement since the Plan began pursuant to NRC Regulations in 1990.

Dated: 5-9-11



J.W. Thurber
Division Manager - Finance

**OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION UNIT NO. 1
2011 BIENNIAL DECOMMISSIONING FUNDING STATUS REPORT TO NRC**

ATTACHMENT A

**2011 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 = MWt reactor rating
Fort Calhoun = 1500
MDA expressed in 1986 Dollars (to be escalated)

Escalation of NRC Formula for MDA

Estimated Decommissioning Cost in Year XX = $\text{MDA} \times (.65L + .13E + .22B)$

Where: "L" is the Labor factor. The Labor factor is to be obtained from "Monthly Labor Review", published by the U. S. Department of Labor - Bureau of Labor Statistics. Specifically, the appropriate regional data from the table entitled "Employment Cost Index - Private Nonfarm Workers", subtitled "Compensation" is to 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:

$$.58P + .42F = E \text{ (Energy Factor)}$$

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

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

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

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

$$\text{OPPD Escalation of MDA} = \$88.2 \text{ million} \times (.65L + .13E + .22B)$$

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

"L" = Labor Index Change

Employment Cost Index - Private Nonfarm Workers - Compensation
Midwest Region (Quarterly Basis Increase)

$$\begin{array}{l} 12-2010 \quad 111.3/100 \\ 12-2005 \quad \times \quad \frac{2.08}{2.31} \text{ (Re-indexed in December 2005)} \\ \quad \quad \quad \quad \quad \quad \quad \quad \text{(an increase of 131.0\%)} \end{array}$$

"E" = Energy Index Change

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

Producer Price Indices

$$\text{Industrial Electric Power} \quad \begin{array}{l} 12-2010 \quad \frac{191.3}{114.2} = 67.51\% \text{ increase change} \\ 1-1986 \end{array}$$

$$\text{Light Fuel Oils} \quad \begin{array}{l} 12-2010 \quad \frac{252.1}{82.0} = 207.40\% \text{ increase change} \\ 1-1986 \end{array}$$

Application of the formula to 12-2010 leads to

$$\begin{array}{l} \text{Energy} = ((191.3/114.2) \times .58) + ((252.1/82.0) \times .42) \\ \text{Energy} = 0.9716 + 1.2912 \\ \text{Energy} = 2.26 \text{ (an increase of 126.2\%)} \end{array}$$

"B" = Waste Burial Index Change
NUREG-1307 (Revision 14)

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.

Generic LLW Disposal Site Index 11-10 $\frac{12.28}{1.86} = 12.28$ (an increase of 1128.0%)
(Waste Vendor Index) 1.00

The escalated cost formula is as follows:

Generic LLW Disposal Site Index

$\$88.2 \text{ million} \times (.65(2.31) + .13(2.26) + .22(12.28)) = \396.948 million |

In summary, OPPD's Fort Calhoun Station Unit No. 1 NRC Minimum Decommissioning Amount estimate escalated to **January 2011** is **\$396,948,000**. |

**OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION UNIT NO. 1
2011 BIENNIAL DECOMMISSIONING FUNDING STATUS REPORT TO NRC**

ATTACHMENT B

U. S. Department of Labor Bureau of Labor Statistics

Employment Cost Index	
Series ID:	CIU201000000230I (B) Not seasonally adjusted
Compensation:	Total compensation
Sector:	Private industry
Periodicity:	Index number
Industryocc:	Midwest
Qtr 4 2010	
111.3	

Producer Price Index - Commodities	
Series ID:	WPU0543 Not seasonally adjusted
Group:	Fuels & related products & power
Item:	Industrial electric power
Base Date:	198200
Dec-10	
191.3(P)	

Series ID:	WPU0573 Not seasonally adjusted
Group:	Fuels & related products & power
Item:	Light fuel oils
Base Date:	198200
Dec-10	
252.1(P)	

U.S. NRC - Report on Waste Burial Charges NUREG-1307, Rev. 14 Published: November 2010	
Values for Generic LLW Disposal Site Direct Disposal with Vendors - PWR	
2010	
12.280	

**OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION UNIT NO. 1
2011 BIENNIAL DECOMMISSIONING FUNDING STATUS REPORT TO NRC**

ATTACHMENT C

**Minimum Decommissioning Amount Decommissioning Fund
Annual Collections, Inflation Rates and Earnings Rates**

Year	Decommissioning Fund Annual Collection for NRC MDA	Inflation Rate	Earnings Rate
2009	\$0	2.00%	2.14%
2010	\$0	2.20%	2.61%
2011	\$0	2.10%	3.44%
2012	\$0	1.90%	4.24%
2013	\$0	1.90%	4.42%
2014	\$0	1.90%	5.26%
2015	\$0	2.00%	5.29%
2016	\$0	2.00%	5.29%
2017	\$0	1.90%	5.29%
2018	\$0	1.90%	5.29%
2019	\$0	1.80%	5.29%
2020	\$0	1.60%	5.29%
2021	\$0	1.60%	5.29%
2022	\$0	1.70%	5.29%
2023	\$0	1.70%	5.29%
2024	\$0	1.80%	5.29%
2025	\$0	1.80%	5.29%
2026	\$0	1.90%	5.29%
2027	\$0	1.90%	5.29%
2028	\$0	2.00%	5.29%
2029	\$0	1.90%	5.29%
2030	\$0	1.90%	5.29%
2031	\$0	1.90%	5.29%
2032	\$0	1.90%	5.29%
2033	\$0	1.90%	5.29%

2008 Site-Specific Decommissioning Cost Study

DECOMMISSIONING COST UPDATE
for the
FORT CALHOUN STATION



prepared for

Omaha Public Power District

prepared by

TLG Services, Inc.
Bridgewater, Connecticut

July 2008

APPROVALS

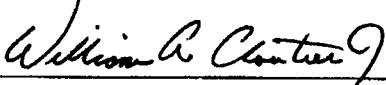
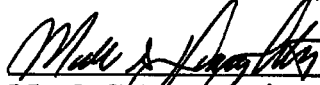
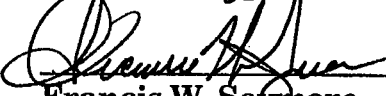
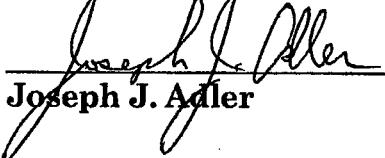
Project Manager	 _____ William A. Cloutier, Jr.	<u>28 July 2008</u> Date
Project Engineer	 _____ Mark S. Houghton	<u>07/28/2008</u> Date
Technical Manager	 _____ Francis W. Setmore	<u>7/28/08</u> Date
Quality Assurance Manager (acting)	 _____ Joseph J. Adler	<u>7/28/08</u> Date

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REVISION LOG

No.	CRA No.	Date	Item Revised	Reason for Revision
0		07/28/2008		Original Issue

DECOMMISSIONING COST STUDY UPDATE

This summary report presents an updated estimate of the cost to promptly decommission the Fort Calhoun Station. The update is based upon an analysis issued in 2003,^[1] revised to incorporate major changes in the economic (and limited technical) assumptions of the previous study. Although the previous report was issued in January of 2003, the results were reported in 2001 dollars.

The current cost estimate was developed by updating the economic inputs and spent fuel strategy from the previous decommissioning cost model. The current estimate is reported in 2007 dollars and reflects updated labor costs (both utility and craft), post-9/11 security levels, current material and equipment costs, energy and transportation costs, as well as current costs for low-level radioactive waste processing and controlled disposal.

A comparison table is provided at the end of this section (comparing the major cost elements in the 2001 and 2007 estimates). Updated schedules of expenditures are provided in a format consistent with the 2003 study (labeled as Tables 3.1 through 3.4). A detail cost table (Table C) is included for the 2007 estimate along with the associated tables from Appendix D.

The current estimate was developed using the basic inventory and plant design information from the 2001 or previous cost model. The cost model inputs, estimating assumptions and site-specific considerations were reviewed for the 2007 analysis. The cost model was modified when new information was provided, updated site-specific information was obtained from the client, or experience from recent decommissioning projects justified a change.

Overall, the estimate to decommission Fort Calhoun increased 40% over the six-year period (2001-2007 financial years). As can be seen in Table 1, the increase in the cost is primarily associated with the management of the spent fuel (+\$93.3 million), program management (+\$59.9 million), and site security (+\$30.2 million). A decrease in low-level radioactive waste management (-\$2.8 million) was realized by using a lower-cost disposal site.

The rationale for specific changes in several major cost centers is discussed in more detail within the following narrative. Comparisons are focused on permutations in the technical work scope and modifications to assumptions that have affected the cost of

¹ "Decommissioning Cost Analysis for the Fort Calhoun Station," TLG Document O02-1429-002, Rev. 0, January 2003

decommissioning (inflationary effects are generally ignored for purposes of this analysis).

The overall decommissioning scope of the current cost estimate has not significantly changed from that presented in 2001. While the scope may not have changed, there are differences in the base assumptions between the two studies. These differences are identified in the discussion of the following cost elements.

1. Decontamination

The \$3.6 million increase in the 2007 estimate is primarily due to labor costs. For example, rates for laborer and craftsmen increased 41% and 46%, respectively, over the six year period.

2. Removal

The increase in craft labor rates (see Decontamination) was offset by a decrease in the cost of the asbestos abatement activity. The 2001 study assumed that remediation of the asbestos at Fort Calhoun would cost approximately \$28.6 million. On the basis that considerable abatement work would have been done in containment to support the replacement of the steam generators, pressurizer and reactor closure head, the material quantities and associated effort to remove and abate asbestos in the 2007 cost model were reduced.

3. Packaging

The \$1.8 million increase in the 2007 cost element is primarily a result of higher labor costs and additional components designated for disposal (i.e., retired components).

4. Transportation

The general increase in transportation tariffs (due to rising fuel prices) over the six-year period was the primary contributor to the \$4.8 million increase in the 2007 transportation cost as well as the additional components generated in the recent change-out programs that were designated for controlled disposal.

5. Low-Level Radioactive Waste Disposal

The 2001 cost model assumed that the majority of material requiring controlled disposal would be disposed of at prices comparable to those being charged by the

Barnwell facility. Disposal of the remaining volume was estimated using Envirocare pricing as a proxy.

The 2007 cost model uses the EnergySolutions (Envirocare) pricing for disposal of the majority of the low-level radioactive waste generated from decontamination and dismantling, with the exception of the activated metal from the reactor vessel and the more highly activated resin produced from liquid waste processing. This change in the waste management model produced a \$2.8 million reduction in the 2007 cost component for low-level radioactive disposal. The change in the pricing model had the greatest cost impact on the steam generators and other large plant components (even with the addition of the retired pressurizer and reactor closure head to the waste stream).

6. Waste Processing and Recycling

A small increase in the unit cost to process and condition waste at a centralized, off-site facility and a change in the assumed density of this waste (lower) contributed to the \$3.4 million increase in the 2007 study.

7. Program Management

The increase in the cost of program management is primarily due to a corresponding increase in the reported level of compensation for the individuals designated to oversee the decommissioning process. The 2001 cost model relied upon escalated salaries from an earlier study. Current salaries were provided by OPPD for the 2007 estimate.

The 2007 organization is also larger during certain phases, based upon experience at recently decommissioned sites. The spent fuel schedule is also three years longer in 2007, adding to the program management costs.

8. Security

Changes in plant security as a result of terrorist acts or threats since 2001 have increased security-related costs. This increase has also been seen at sites that have undergone decommissioning. Consequently, the 2007 decommissioning cost model incorporates a larger security force throughout decommissioning and until the spent fuel is removed from the site. This larger force (and associated increase in compensation level), are the primary factors in the \$30 million increase in the 2007 estimate.

9. Spent Fuel Management

The 2001 and 2007 cost models include the expense to remove the spent fuel from the storage pool, place the assemblies in a multi-purpose canister and load the canister within a DOE-provide transport cask. The major assumptions and schedules of expenditure were provided by OPPD. The appreciable changes are identified below:

Major Activities	2007	2001	Delta	Total Impact
1 st year fuel removed from site	2021	2012	9	
Cessation of Operations (year)	2032	2032	0	
ISFSI Operations (last year)	2058	2055	3	
Decommissioning Fuel Storage Duration (years)	26	23	3	
DSC or TADs purchased	32	30	2	
Overpacks purchased for ISFSI	20	19	1	
DSC unit cost	\$897,000	\$600,000	\$297,000	\$10,704,000
Overpack unit cost	\$249,800	\$250,000	-\$200	\$246,000
Loading/Handling unit cost	\$275,000	\$110,000	\$165,000	\$5,225,000
Operating Costs (annual)	\$5,040,000	\$4,000,000	\$1,040,000	
Operating Duration (years)	25	17	8	\$58,000,000
ISFSI Licensing Fee (annual)	\$215,800	-	\$215,800	\$3,884,400
Total				\$78,059,400
Total (w/contingency)				\$89,768,310
Total Delta in Spent Fuel Management	\$195,525,000	\$102,227,000		\$93,298,000

10. Characterization and Licensing Surveys

There was essentially no change in the cost associated with this activity over the six-year period as methodology changes (added efficiencies) off-set the increase in labor.

11. Regulatory Fees and Insurance

Cost in this category decreased slightly over the six year period. Greater savings were realized in the 2007 insurance model with the application of a shutdown credit. While insurance premiums for the operating unit increased significantly, the credit was the primary contributor to this \$0.7 million decrease in the 2007 total cost for this cost category.

12. Energy

Energy costs increased by \$1.7 million commensurate with the higher price of electricity (from \$0.031 per kilowatt hour in 2001 to \$0.0723 in 2007). The increase was partially offset by a lower usage profile.

13. Equipment and Materials

The cost for supplemental equipment and material increased slightly (\$503 thousand) over the period.

14. Other

Other expenses, including those associated with asbestos and hazardous waste disposition and concrete process, increased \$1.8 million over the six year period.

**TABLE 1
FORT CALHOUN STATION
COMPARISON OF COST ELEMENTS
(thousands of dollars)**

Cost Elements	(\$ 2007)	(\$ 2001)	Delta
Decontamination	11,442	7,846	3,596
Removal	78,494	90,022	(11,528)
Packaging	11,465	9,620	1,845
Transportation	8,505	3,750	4,755
Low-Level Radioactive Waste Disposal	46,397	49,164	(2,767)
Off-site Waste Processing	29,438	26,058	3,380
Program Management (including engineering)	194,786	134,905	59,881
Security	43,424	13,188	30,236
Spent Fuel Management	195,525	102,227	93,298
Characterization and Licensing Surveys	8,971	8,277	694
Regulatory Fees and Insurance	7,332	8,083	(751)
Energy	7,036	5,329	1,707
Equipment and Material	5,937	5,434	503
Other (including asbestos/hazardous waste disposition and concrete processing)	3,255	1,429	1,826
Total	652,009	465,332	186,677

**TABLE 3.1
FORT CALHOUN STATION
SCHEDULE OF ANNUAL EXPENDITURES
(thousands of 2007 dollars)**

Year	Labor	Equip & Materials	Energy	Burial	Other	Yearly Totals
2033	17,839	494	483	13	6,747	25,577
2034	48,177	4,855	1,700	3,052	29,310	87,094
2035	46,743	16,621	1,292	27,085	17,201	108,942
2036	44,352	10,998	1,043	19,782	14,599	90,773
2037	42,303	3,900	912	9,042	15,710	71,867
2038	42,303	3,900	912	9,042	15,710	71,867
2039	27,315	2,815	456	5,130	10,561	46,277
2040	17,574	4,932	175	11	9,861	32,552
2041	9,474	4,171	63	0	5,636	19,343
2042	0	0	0	0	5,275	5,275
2043	0	0	0	0	5,275	5,275
2044	0	0	0	0	5,289	5,289
2045	0	0	0	0	5,275	5,275
2046	0	0	0	0	5,275	5,275
2047	0	0	0	0	5,275	5,275
2048	0	0	0	0	5,289	5,289
2049	0	0	0	0	5,275	5,275
2050	0	0	0	0	5,275	5,275
2051	0	0	0	0	5,275	5,275
2052	0	0	0	0	5,289	5,289
2053	0	0	0	0	5,275	5,275
2054	0	0	0	0	5,275	5,275
2055	0	0	0	0	5,275	5,275
2056	0	0	0	0	5,289	5,289
2057	0	0	0	0	5,275	5,275
2058	0	303	0	0	12,957	13,260
	296,080	52,987	7,036	73,157	222,749	652,009

**TABLE 3.2
FORT CALHOUN STATION
SCHEDULE OF ANNUAL EXPENDITURES
LICENSE TERMINATION COST
(thousands of 2007 dollars)**

Year	Labor	Equip & Materials	Energy	Burial	Other	Yearly Totals
2033	17,700	494	483	13	580	19,270
2034	47,584	4,855	1,700	3,052	12,034	69,225
2035	46,130	16,608	1,292	27,085	7,282	98,397
2036	43,346	10,981	1,043	19,782	3,376	78,527
2037	40,823	3,880	912	9,042	1,792	56,449
2038	40,823	3,880	912	9,042	1,792	56,449
2039	27,157	2,813	456	5,130	4,378	39,933
2040	7,316	388	106	11	4,188	12,009
2041	58	0	0	0	0	58
2042	0	0	0	0	0	0
2043	0	0	0	0	0	0
2044	0	0	0	0	0	0
2045	0	0	0	0	0	0
2046	0	0	0	0	0	0
2047	0	0	0	0	0	0
2048	0	0	0	0	0	0
2049	0	0	0	0	0	0
2050	0	0	0	0	0	0
2051	0	0	0	0	0	0
2052	0	0	0	0	0	0
2053	0	0	0	0	0	0
2054	0	0	0	0	0	0
2055	0	0	0	0	0	0
2056	0	0	0	0	0	0
2057	0	0	0	0	0	0
2058	0	303	0	0	2,679	2,982
	270,935	44,202	6,904	73,157	38,102	433,300

**TABLE 3.3
FORT CALHOUN STATION
SCHEDULE OF ANNUAL EXPENDITURES
SPENT FUEL MANAGEMENT COSTS
(thousands of 2007 dollars)**

Year	Labor	Equip & Materials	Energy	Burial	Other	Yearly Totals
2033	0	0	0	0	6,167	6,167
2034	0	0	0	0	17,276	17,276
2035	0	0	0	0	9,919	9,919
2036	0	0	0	0	11,222	11,222
2037	0	0	0	0	13,918	13,918
2038	0	0	0	0	13,918	13,918
2039	0	0	0	0	6,183	6,183
2040	2,639	0	21	0	5,668	8,328
2041	2,422	0	19	0	5,631	8,073
2042	0	0	0	0	5,275	5,275
2043	0	0	0	0	5,275	5,275
2044	0	0	0	0	5,289	5,289
2045	0	0	0	0	5,275	5,275
2046	0	0	0	0	5,275	5,275
2047	0	0	0	0	5,275	5,275
2048	0	0	0	0	5,289	5,289
2049	0	0	0	0	5,275	5,275
2050	0	0	0	0	5,275	5,275
2051	0	0	0	0	5,275	5,275
2052	0	0	0	0	5,289	5,289
2053	0	0	0	0	5,275	5,275
2054	0	0	0	0	5,275	5,275
2055	0	0	0	0	5,275	5,275
2056	0	0	0	0	5,289	5,289
2057	0	0	0	0	5,275	5,275
2058	0	0	0	0	10,278	10,278
	5,061	0	40	0	184,639	189,739

**TABLE 3.4
FORT CALHOUN STATION
SCHEDULE OF ANNUAL EXPENDITURES
SITE RESTORATION COSTS
(thousands of 2007 dollars)**

Year	Labor	Equip & Materials	Energy	Burial	Other	Yearly Totals
2033	139	0	0	0	0	139
2034	594	0	0	0	0	594
2035	613	13	0	0	0	626
2036	1,006	17	0	0	0	1,023
2037	1,480	20	0	0	0	1,500
2038	1,480	20	0	0	0	1,500
2039	158	2	0	0	0	160
2040	7,619	4,544	48	0	4	12,216
2041	6,994	4,171	44	0	4	11,213
2042	0	0	0	0	0	0
2043	0	0	0	0	0	0
2044	0	0	0	0	0	0
2045	0	0	0	0	0	0
2046	0	0	0	0	0	0
2047	0	0	0	0	0	0
2048	0	0	0	0	0	0
2049	0	0	0	0	0	0
2050	0	0	0	0	0	0
2051	0	0	0	0	0	0
2052	0	0	0	0	0	0
2053	0	0	0	0	0	0
2054	0	0	0	0	0	0
2055	0	0	0	0	0	0
2056	0	0	0	0	0	0
2057	0	0	0	0	0	0
2058	0	0	0	0	0	0
	20,084	8,786	93	0	9	28,971

Table C
Fort Calhoun Station
DECON Decommissioning Cost Estimate
(thousands of 2007 Dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
PERIOD 1a - Shutdown through Transition																					
Period 1a Direct Decommissioning Activities																					
1a.1.1	Prepare preliminary decommissioning cost	-	-	-	-	-	-	88	13	101	101	-	-	-	-	-	-	-	-	-	1,300
1a.1.2	Notification of Cessation of Operations	-	-	-	-	-	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-
1a.1.3	Remove fuel & source material	-	-	-	-	-	-	-	-	n/a	-	-	-	-	-	-	-	-	-	-	-
1a.1.4	Notification of Permanent Defueling	-	-	-	-	-	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-
1a.1.5	Deactivate plant systems & process waste	-	-	-	-	-	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-
1a.1.6	Prepare and submit PSDAR	-	-	-	-	-	-	135	20	155	155	-	-	-	-	-	-	-	-	-	2,000
1a.1.7	Review plant dwgs & specs.	-	-	-	-	-	-	310	47	357	357	-	-	-	-	-	-	-	-	-	4,600
1a.1.8	Perform detailed rad survey	-	-	-	-	-	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-
1a.1.9	Estimate by-product inventory	-	-	-	-	-	-	67	10	78	78	-	-	-	-	-	-	-	-	-	1,000
1a.1.10	End product description	-	-	-	-	-	-	67	10	78	78	-	-	-	-	-	-	-	-	-	1,000
1a.1.11	Detailed by-product inventory	-	-	-	-	-	-	88	13	101	101	-	-	-	-	-	-	-	-	-	1,300
1a.1.12	Define major work sequence	-	-	-	-	-	-	506	76	582	582	-	-	-	-	-	-	-	-	-	7,500
1a.1.13	Perform SER and EA	-	-	-	-	-	-	209	31	240	240	-	-	-	-	-	-	-	-	-	3,100
1a.1.14	Perform Site-Specific Cost Study	-	-	-	-	-	-	337	51	388	388	-	-	-	-	-	-	-	-	-	5,000
1a.1.15	Prepare/submit License Termination Plan	-	-	-	-	-	-	276	41	318	318	-	-	-	-	-	-	-	-	-	4,096
1a.1.16	Receive NRC approval of termination plan	-	-	-	-	-	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-
Activity Specifications																					
1a.1.17.1	Plant & temporary facilities	-	-	-	-	-	-	332	50	382	344	-	38	-	-	-	-	-	-	-	4,920
1a.1.17.2	Plant systems	-	-	-	-	-	-	281	42	323	291	-	32	-	-	-	-	-	-	-	4,167
1a.1.17.3	NSSS Decontamination Flush	-	-	-	-	-	-	34	5	39	39	-	-	-	-	-	-	-	-	-	500
1a.1.17.4	Reactor internals	-	-	-	-	-	-	479	72	551	551	-	-	-	-	-	-	-	-	-	7,100
1a.1.17.5	Reactor vessel	-	-	-	-	-	-	438	66	504	504	-	-	-	-	-	-	-	-	-	6,500
1a.1.17.6	Biological shield	-	-	-	-	-	-	34	5	39	39	-	-	-	-	-	-	-	-	-	500
1a.1.17.7	Steam generators	-	-	-	-	-	-	210	32	242	242	-	-	-	-	-	-	-	-	-	3,120
1a.1.17.8	Reinforced concrete	-	-	-	-	-	-	108	16	124	62	-	62	-	-	-	-	-	-	-	1,600
1a.1.17.9	Main Turbine	-	-	-	-	-	-	27	4	31	-	-	31	-	-	-	-	-	-	-	400
1a.1.17.10	Main Condensers	-	-	-	-	-	-	27	4	31	-	-	31	-	-	-	-	-	-	-	400
1a.1.17.11	Plant structures & buildings	-	-	-	-	-	-	210	32	242	121	-	121	-	-	-	-	-	-	-	3,120
1a.1.17.12	Waste management	-	-	-	-	-	-	310	47	357	357	-	-	-	-	-	-	-	-	-	4,600
1a.1.17.13	Facility & site closeout	-	-	-	-	-	-	61	9	70	35	-	35	-	-	-	-	-	-	-	900
1a.1.17	Total	-	-	-	-	-	-	2,552	383	2,935	2,584	-	351	-	-	-	-	-	-	-	37,827
Planning & Site Preparations																					
1a.1.18	Prepare dismantling sequence	-	-	-	-	-	-	162	24	186	186	-	-	-	-	-	-	-	-	-	2,400
1a.1.19	Plant prep. & temp. svces	-	-	-	-	-	-	2,419	363	2,782	2,782	-	-	-	-	-	-	-	-	-	-
1a.1.20	Design water clean-up system	-	-	-	-	-	-	94	14	109	109	-	-	-	-	-	-	-	-	-	1,400
1a.1.21	Rigging/Cont. Cntrl Envlp/tooling/etc.	-	-	-	-	-	-	2,048	307	2,355	2,355	-	-	-	-	-	-	-	-	-	-
1a.1.22	Procure casks/liners & containers	-	-	-	-	-	-	83	12	95	95	-	-	-	-	-	-	-	-	-	1,230
1a.1	Subtotal Period 1a Activity Costs	-	-	-	-	-	-	9,442	1,416	10,859	10,508	-	351	-	-	-	-	-	-	-	73,753
Period 1a Collateral Costs																					
1a.3.1	MPCs and Overpacks	-	-	-	-	-	-	8,701	-	8,701	-	8,701	-	-	-	-	-	-	-	-	-
1a.3.2	Spent Fuel Loading and Handling	-	-	-	-	-	-	2,206	-	2,206	-	2,206	-	-	-	-	-	-	-	-	-
1a.3	Subtotal Period 1a Collateral Costs	-	-	-	-	-	-	10,907	-	10,907	-	10,907	-	-	-	-	-	-	-	-	-
Period 1a Period-Dependent Costs																					
1a.4.1	Insurance	-	-	-	-	-	-	1,064	106	1,170	1,170	-	-	-	-	-	-	-	-	-	-
1a.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1a.4.3	Health physics supplies	-	306	-	-	-	-	-	76	382	382	-	-	-	-	-	-	-	-	-	-
1a.4.4	Heavy equipment rental	-	292	-	-	-	-	-	44	335	335	-	-	-	-	-	-	-	-	-	-
1a.4.5	Disposal of DAW generated	-	-	11	4	-	27	-	8	50	50	-	-	-	610	-	-	-	12,190	21	-
1a.4.6	Plant energy budget	-	-	-	-	-	-	1,058	159	1,216	1,216	-	-	-	-	-	-	-	-	-	-

Table C
Fort Calhoun Station
DECON Decommissioning Cost Estimate
(thousands of 2007 Dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours	
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet				
Period 1a Period-Dependent Costs (continued)																						
1a.4.7	NRC Fees	-	-	-	-	-	-	258	26	284	284	-	-	-	-	-	-	-	-	-	-	
1a.4.8	Emergency Planning Fees	-	-	-	-	-	-	450	45	495	-	495	-	-	-	-	-	-	-	-	-	
1a.4.9	Spent Fuel Pool O&M	-	-	-	-	-	-	738	111	849	-	849	-	-	-	-	-	-	-	-	-	
1a.4.10	ISFSI Operating Costs	-	-	-	-	-	-	3,275	-	3,275	-	3,275	-	-	-	-	-	-	-	-	-	
1a.4.11	Security Staff Cost	-	-	-	-	-	-	6,397	960	7,357	7,357	-	-	-	-	-	-	-	-	-	157,471	
1a.4.12	Utility Staff Cost	-	-	-	-	-	-	23,655	3,548	27,203	27,203	-	-	-	-	-	-	-	-	-	423,400	
1a.4	Subtotal Period 1a Period-Dependent Costs	-	597	11	4	-	27	36,895	5,083	42,617	37,999	4,618	-	-	610	-	-	-	-	12,190	21	580,871
1a.0	TOTAL PERIOD 1a COST	-	597	11	4	-	27	57,244	6,499	64,382	48,507	15,525	351	-	610	-	-	-	-	12,190	21	654,624
PERIOD 1b - Decommissioning Preparations																						
Period 1b Direct Decommissioning Activities																						
Detailed Work Procedures																						
1b.1.1.1	Plant systems	-	-	-	-	-	-	319	48	367	330	-	37	-	-	-	-	-	-	-	-	4,733
1b.1.1.2	NSSS Decontamination Flush	-	-	-	-	-	-	67	10	78	78	-	-	-	-	-	-	-	-	-	-	1,000
1b.1.1.3	Reactor internals	-	-	-	-	-	-	169	25	194	194	-	-	-	-	-	-	-	-	-	-	2,500
1b.1.1.4	Remaining buildings	-	-	-	-	-	-	91	14	105	26	-	79	-	-	-	-	-	-	-	-	1,350
1b.1.1.5	CRD cooling assembly	-	-	-	-	-	-	67	10	78	78	-	-	-	-	-	-	-	-	-	-	1,000
1b.1.1.6	CRD housings & ICI tubes	-	-	-	-	-	-	67	10	78	78	-	-	-	-	-	-	-	-	-	-	1,000
1b.1.1.7	Incore instrumentation	-	-	-	-	-	-	67	10	78	78	-	-	-	-	-	-	-	-	-	-	1,000
1b.1.1.8	Reactor vessel	-	-	-	-	-	-	245	37	282	282	-	-	-	-	-	-	-	-	-	-	3,630
1b.1.1.9	Facility closeout	-	-	-	-	-	-	81	12	93	47	-	47	-	-	-	-	-	-	-	-	1,200
1b.1.1.10	Missile shields	-	-	-	-	-	-	30	5	35	35	-	-	-	-	-	-	-	-	-	-	450
1b.1.1.11	Biological shield	-	-	-	-	-	-	81	12	93	93	-	-	-	-	-	-	-	-	-	-	1,200
1b.1.1.12	Steam generators	-	-	-	-	-	-	310	47	357	357	-	-	-	-	-	-	-	-	-	-	4,600
1b.1.1.13	Reinforced concrete	-	-	-	-	-	-	67	10	78	39	-	39	-	-	-	-	-	-	-	-	1,000
1b.1.1.14	Main Turbine	-	-	-	-	-	-	105	16	121	-	-	121	-	-	-	-	-	-	-	-	1,560
1b.1.1.15	Main Condensers	-	-	-	-	-	-	105	16	121	-	-	121	-	-	-	-	-	-	-	-	1,560
1b.1.1.16	Auxiliary building	-	-	-	-	-	-	184	28	212	191	-	21	-	-	-	-	-	-	-	-	2,730
1b.1.1.17	Reactor building	-	-	-	-	-	-	184	28	212	191	-	21	-	-	-	-	-	-	-	-	2,730
1b.1.1	Total	-	-	-	-	-	-	2,243	336	2,579	2,094	-	485	-	-	-	-	-	-	-	-	33,243
1b.1.2	Decon primary loop	588	-	-	-	-	-	-	294	882	882	-	-	-	-	-	-	-	-	-	1,067	-
1b.1	Subtotal Period 1b Activity Costs	588	-	-	-	-	-	2,243	630	3,461	2,976	-	485	-	-	-	-	-	-	-	1,067	33,243
Period 1b Additional Costs																						
1b.2.1	Site Characterization	-	-	-	-	-	-	1,716	515	2,230	2,230	-	-	-	-	-	-	-	-	-	-	-
1b.2.2	Spent Fuel Pool Isolation	-	-	-	-	-	-	9,133	1,370	10,503	10,503	-	-	-	-	-	-	-	-	-	-	-
1b.2.3	Asbestos Abatement	-	2,783	2	215	-	2,229	-	1,286	6,515	6,515	-	-	42,450	-	-	-	-	-	551,850	37,708	-
1b.2	Subtotal Period 1b Additional Costs	-	2,783	2	215	-	2,229	10,849	3,170	19,249	19,249	-	-	42,450	-	-	-	-	-	551,850	37,708	-
Period 1b Collateral Costs																						
1b.3.1	Decon equipment	588	-	-	-	-	-	-	88	677	677	-	-	-	-	-	-	-	-	-	-	-
1b.3.2	Process liquid waste	35	-	66	381	-	833	-	289	1,604	1,604	-	-	-	221	1,302	-	-	-	157,732	297	-
1b.3.3	Small tool allowance	-	33	-	-	-	-	-	5	38	38	-	-	-	-	-	-	-	-	-	-	-
1b.3.4	Pipe cutting equipment	-	957	-	-	-	-	-	143	1,100	1,100	-	-	-	-	-	-	-	-	-	-	-
1b.3.5	Decon rig	1,243	-	-	-	-	-	-	186	1,430	1,430	-	-	-	-	-	-	-	-	-	-	-
1b.3.6	MPCs and Overpacks	-	-	-	-	-	-	5,460	-	5,460	-	5,460	-	-	-	-	-	-	-	-	-	-
1b.3.7	Spent Fuel Loading and Handling	-	-	-	-	-	-	1,370	-	1,370	-	1,370	-	-	-	-	-	-	-	-	-	-
1b.3	Subtotal Period 1b Collateral Costs	1,867	990	66	381	-	833	6,830	713	11,678	4,849	6,830	-	-	221	1,302	-	-	-	157,732	297	-

Table C
Fort Calhoun Station
DECON Decommissioning Cost Estimate
(thousands of 2007 Dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
Period 1b Period-Dependent Costs																					
1b.4.1	Decon supplies	18	-	-	-	-	-	-	5	23	23	-	-	-	-	-	-	-	-	-	-
1b.4.2	Insurance	-	-	-	-	-	-	536	54	590	590	-	-	-	-	-	-	-	-	-	-
1b.4.3	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1b.4.4	Health physics supplies	-	277	-	-	-	-	-	69	347	347	-	-	-	-	-	-	-	-	-	-
1b.4.5	Heavy equipment rental	-	147	-	-	-	-	-	22	169	169	-	-	-	-	-	-	-	-	-	-
1b.4.6	Disposal of DAW generated	-	-	6	2	-	16	-	5	29	29	-	-	-	353	-	-	-	7,063	12	-
1b.4.7	Plant energy budget	-	-	-	-	-	-	1,066	160	1,226	1,226	-	-	-	-	-	-	-	-	-	-
1b.4.8	NRC Fees	-	-	-	-	-	-	130	13	143	143	-	-	-	-	-	-	-	-	-	-
1b.4.9	Emergency Planning Fees	-	-	-	-	-	-	227	23	249	-	249	-	-	-	-	-	-	-	-	-
1b.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	372	56	428	-	428	-	-	-	-	-	-	-	-	-
1b.4.11	ISFSI Operating Costs	-	-	-	-	-	-	2,541	-	2,541	-	2,541	-	-	-	-	-	-	-	-	-
1b.4.12	Security Staff Cost	-	-	-	-	-	-	3,225	484	3,709	3,709	-	-	-	-	-	-	-	-	-	79,383
1b.4.13	Utility Staff Cost	-	-	-	-	-	-	15,159	2,274	17,433	17,433	-	-	-	-	-	-	-	-	-	267,063
1b.4	Subtotal Period 1b Period-Dependent Costs	18	424	6	2	-	16	23,257	3,164	26,887	23,669	3,218	-	-	353	-	-	-	7,063	12	346,446
1b.0	TOTAL PERIOD 1b COST	2,473	4,197	74	598	-	3,078	43,179	7,677	61,276	50,743	10,048	485	-	43,024	1,302	-	-	716,645	39,083	379,689
PERIOD 1 TOTALS		2,473	4,794	85	602	-	3,105	100,423	14,176	125,659	99,250	25,573	836	-	43,634	1,302	-	-	728,836	39,104	1,034,313
PERIOD 2a - Large Component Removal																					
Period 2a Direct Decommissioning Activities																					
Nuclear Steam Supply System Removal																					
2a.1.1.1	Reactor Coolant Piping	87	82	8	11	-	228	-	123	539	539	-	-	-	611	-	-	-	73,845	4,027	-
2a.1.1.2	Pressurizer Quench Tank	13	11	2	3	-	60	-	25	114	114	-	-	-	175	-	-	-	19,475	571	-
2a.1.1.3	Reactor Coolant Pumps & Motors	64	70	32	43	81	814	-	274	1,377	1,377	-	-	240	3,099	-	-	-	488,840	3,572	-
2a.1.1.4	Pressurizer	19	43	385	376	-	365	-	206	1,395	1,395	-	-	-	1,392	-	-	-	157,807	2,073	-
2a.1.1.5	Steam Generators	117	5,307	1,413	1,041	1,145	1,422	-	2,210	12,655	12,655	-	-	15,755	5,417	-	-	-	1,385,888	11,616	4,100
2a.1.1.6	Retired Steam Generator Units	-	-	1,162	1,029	1,145	1,384	-	788	5,508	5,508	-	-	15,755	5,273	-	-	-	1,315,110	5,400	2,850
2a.1.1.7	CRDMs/ICIs/Service Structure Removal	88	48	90	28	-	141	-	105	501	501	-	-	-	2,368	-	-	-	57,813	3,086	-
2a.1.1.8	Reactor Vessel Internals	150	2,418	2,934	974	-	9,948	214	7,872	24,510	24,510	-	-	-	3,005	501	1,033	-	351,142	27,717	1,241
2a.1.1.9	Reactor Vessel	60	4,977	1,330	390	-	7,096	214	7,773	21,839	21,839	-	-	-	1,239	4,291	-	-	628,846	27,717	1,241
2a.1.1	Totals	598	12,956	7,356	3,895	2,371	21,458	428	19,377	68,438	68,438	-	-	31,749	22,580	4,791	1,033	-	4,478,765	85,778	9,431
Removal of Major Equipment																					
2a.1.2	Main Turbine/Generator	-	175	105	34	388	230	-	175	1,108	1,108	-	-	1,995	1,111	-	-	-	269,230	4,368	-
2a.1.3	Main Condensers	-	689	43	23	260	163	-	260	1,438	1,438	-	-	2,521	743	-	-	-	180,159	17,642	-
Cascading Costs from Clean Building Demolition																					
2a.1.4.1	Containment Building	-	367	-	-	-	-	-	55	422	422	-	-	-	-	-	-	-	-	-	5,781
2a.1.4.2	Auxiliary Building	-	235	-	-	-	-	-	35	270	270	-	-	-	-	-	-	-	-	-	3,547
2a.1.4.3	Radwaste Building	-	36	-	-	-	-	-	5	41	41	-	-	-	-	-	-	-	-	-	732
2a.1.4	Totals	-	638	-	-	-	-	-	96	733	733	-	-	-	-	-	-	-	-	-	10,060
Disposal of Plant Systems																					
2a.1.5.1	Auxiliary Steam & Condensate Return	-	65	-	-	-	-	-	10	75	-	-	75	-	-	-	-	-	-	-	1,914
2a.1.5.2	Auxiliary Steam & Condensate Return-RCA	-	23	0	2	29	-	-	10	65	65	-	-	316	-	-	-	-	12,831	542	-
2a.1.5.3	Chemical Feed	-	5	-	-	-	-	-	1	5	-	-	5	-	-	-	-	-	-	-	134
2a.1.5.4	Chemical Feed-RCA	-	4	0	0	4	-	-	2	10	10	-	-	43	-	-	-	-	1,739	85	-
2a.1.5.5	Circulating Water	-	221	-	-	-	-	-	33	254	-	-	254	-	-	-	-	-	-	-	6,317
2a.1.5.6	Condensate	-	136	-	-	-	-	-	20	156	-	-	156	-	-	-	-	-	-	-	3,866
2a.1.5.7	Condenser Evacuation & H2-CO2 Piping	-	31	-	-	-	-	-	5	35	-	-	35	-	-	-	-	-	-	-	857
2a.1.5.8	Gas Control	-	0	-	-	-	-	-	0	0	-	-	0	-	-	-	-	-	-	-	5
2a.1.5.9	Heater Drains & Vents	-	32	-	-	-	-	-	5	37	-	-	37	-	-	-	-	-	-	-	935
2a.1.5.10	Heater Drains & Vents-RCA	-	65	2	6	115	-	-	35	223	223	-	-	1,240	-	-	-	-	50,358	1,477	-

Table C
Fort Calhoun Station
DECON Decommissioning Cost Estimate
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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
Disposal of Plant Systems (continued)																					
2a.1.5.11	Jacket Water For Diesel Gen # 1-RCA	-	4	0	0	4	-	-	2	10	10	-	-	46	-	-	-	-	1,875	90	-
2a.1.5.12	Jacket Water For Diesel Gen # 2-RCA	-	3	0	0	4	-	-	2	9	9	-	-	43	-	-	-	-	1,748	80	-
2a.1.5.13	Lube Oil	-	33	-	-	-	-	-	5	38	-	-	38	-	-	-	-	-	-	936	-
2a.1.5.14	Main Steam	-	47	-	-	-	-	-	7	54	-	-	54	-	-	-	-	-	-	1,363	-
2a.1.5.15	Main Steam-RCA	-	95	5	16	315	-	-	74	505	505	-	-	3,387	-	-	-	-	137,564	2,298	-
2a.1.5.16	Secondary Plant Sampling	-	14	-	-	-	-	-	2	17	-	-	17	-	-	-	-	-	-	437	-
2a.1.5.17	Shaft Sealing Steam	-	10	-	-	-	-	-	1	11	-	-	11	-	-	-	-	-	-	273	-
2a.1.5.18	Starting Air - RCA	-	40	1	3	54	-	-	18	115	115	-	-	579	-	-	-	-	23,511	959	-
2a.1.5.19	Stator Winding Cooling Water	-	75	-	-	-	-	-	11	86	-	-	86	-	-	-	-	-	-	2,047	-
2a.1.5.20	Steam Generator Blowdown Processing-RCA	-	135	3	9	174	-	-	61	382	382	-	-	1,869	-	-	-	-	75,911	3,101	-
2a.1.5.21	Steam Generator Feedwater & Blowdown-RCA	-	757	51	175	3,369	-	-	726	5,077	5,077	-	-	36,228	-	-	-	-	1,471,243	18,540	-
2a.1.5.22	Turbine Plant Cooling Water	-	43	-	-	-	-	-	7	50	-	-	50	-	-	-	-	-	-	1,239	-
2a.1.5.23	Turbine Plant Cooling Water-RCA	-	31	1	3	52	-	-	16	103	103	-	-	556	-	-	-	-	22,582	752	-
2a.1.5	Totals	-	1,870	62	214	4,121	-	-	1,053	7,319	6,499	-	819	44,308	-	-	-	-	1,799,361	48,248	-
2a.1.6	Scaffolding in support of decommissioning	-	613	9	4	68	9	-	167	870	870	-	-	656	41	-	-	-	33,161	17,285	-
2a.1	Subtotal Period 2a Activity Costs	598	16,941	7,576	4,170	7,207	21,860	428	21,127	79,906	79,086	-	819	81,228	24,475	4,791	1,033	-	6,760,676	183,382	9,431
Period 2a Additional Costs																					
2a.2.1	Retired Presurizer	-	-	385	376	-	365	-	186	1,312	1,312	-	-	-	1,392	-	-	-	157,807	640	-
2a.2.2	Retired RX closure head	-	-	447	34	-	835	30	263	1,608	1,608	-	-	-	1,949	-	-	-	128,257	2,160	249
2a.2	Subtotal Period 2a Additional Costs	-	-	832	410	-	1,200	30	449	2,920	2,920	-	-	-	3,341	-	-	-	286,064	2,800	249
Period 2a Collateral Costs																					
2a.3.1	Process liquid waste	64	-	19	105	-	137	-	84	409	409	-	-	-	434	-	-	-	26,041	85	-
2a.3.2	Small tool allowance	-	102	-	-	-	-	-	15	118	106	-	12	-	-	-	-	-	-	-	-
2a.3.3	MPCs and Overpacks	-	-	-	-	-	-	2,543	-	2,543	-	2,543	-	-	-	-	-	-	-	-	-
2a.3.4	Spent Fuel Loading and Handling	-	-	-	-	-	-	780	-	780	-	780	-	-	-	-	-	-	-	-	-
2a.3	Subtotal Period 2a Collateral Costs	64	102	19	105	-	137	3,323	99	3,850	515	3,323	12	-	434	-	-	-	26,041	85	-
Period 2a Period-Dependent Costs																					
2a.4.1	Decon supplies	51	-	-	-	-	-	-	13	64	64	-	-	-	-	-	-	-	-	-	-
2a.4.2	Insurance	-	-	-	-	-	-	638	64	702	702	-	-	-	-	-	-	-	-	-	-
2a.4.3	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2a.4.4	Health physics supplies	-	963	-	-	-	-	-	241	1,204	1,204	-	-	-	-	-	-	-	-	-	-
2a.4.5	Heavy equipment rental	-	2,021	-	-	-	-	-	303	2,324	2,324	-	-	-	-	-	-	-	-	-	-
2a.4.6	Disposal of DAW generated	-	-	62	23	-	156	-	49	290	290	-	-	-	3,521	-	-	-	70,411	119	-
2a.4.7	Plant energy budget	-	-	-	-	-	-	1,426	214	1,640	1,640	-	-	-	-	-	-	-	-	-	-
2a.4.8	NRC Fees	-	-	-	-	-	-	488	49	537	537	-	-	-	-	-	-	-	-	-	-
2a.4.9	Emergency Planning Fees	-	-	-	-	-	-	638	64	702	-	702	-	-	-	-	-	-	-	-	-
2a.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	1,047	157	1,204	-	1,204	-	-	-	-	-	-	-	-	-
2a.4.11	ISFSI Operating Costs	-	-	-	-	-	-	7,147	-	7,147	-	7,147	-	-	-	-	-	-	-	-	-
2a.4.12	Security Staff Cost	-	-	-	-	-	-	8,017	1,202	9,219	9,219	-	-	-	-	-	-	-	-	-	187,220
2a.4.13	Utility Staff Cost	-	-	-	-	-	-	35,443	5,316	40,760	40,760	-	-	-	-	-	-	-	-	-	611,240
2a.4	Subtotal Period 2a Period-Dependent Costs	51	2,984	62	23	-	156	54,844	7,672	65,792	56,739	9,053	-	-	3,521	-	-	-	70,411	119	798,460
2a.0	TOTAL PERIOD 2a COST	712	20,027	8,488	4,708	7,207	23,354	58,624	29,347	152,467	139,259	12,376	831	81,228	31,770	4,791	1,033	-	7,143,192	186,386	808,140
PERIOD 2b - Site Decontamination																					
Period 2b Direct Decommissioning Activities																					
Disposal of Plant Systems																					
2b.1.1.1	Chemical & Volume Control	303	301	20	19	106	240	-	308	1,297	1,297	-	-	1,142	1,131	-	-	-	144,922	13,769	-
2b.1.1.2	Component Cooling - RCA	-	279	20	70	1,348	-	-	285	2,002	2,002	-	-	14,495	-	-	-	-	588,633	6,768	-

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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes			Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours	
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet				
Disposal of Plant Systems (continued)																					
2b.1.1.3	Compressed Air	-	41	-	-	-	-	-	6	48	-	-	48	-	-	-	-	-	-	1,188	-
2b.1.1.4	Compressed Air-RCA	-	16	0	1	13	-	-	6	36	36	-	-	141	-	-	-	-	5,716	374	-
2b.1.1.5	Demineralized Water	-	136	-	-	-	-	-	20	157	-	-	157	-	-	-	-	-	-	3,769	-
2b.1.1.6	Demineralized Water-RCA	-	56	1	4	76	-	-	26	164	164	-	-	818	-	-	-	-	33,204	1,292	-
2b.1.1.7	Electrical - Clean	-	2,827	-	-	-	-	-	424	3,251	-	-	3,251	-	-	-	-	-	-	77,827	-
2b.1.1.8	Electrical - Clean-RCA	-	5,024	116	401	7,729	-	-	2,487	15,758	15,758	-	-	83,110	-	-	-	-	3,375,151	125,372	-
2b.1.1.9	Fire Protection	-	78	-	-	-	-	-	12	89	-	-	89	-	-	-	-	-	-	2,211	-
2b.1.1.10	Fire Protection-RCA	-	132	4	13	256	-	-	74	478	478	-	-	2,747	-	-	-	-	111,573	3,112	-
2b.1.1.11	Fuel Oil	-	27	-	-	-	-	-	4	31	-	-	31	-	-	-	-	-	-	720	-
2b.1.1.12	Fuel Oil-RCA	-	2	0	0	2	-	-	1	6	6	-	-	24	-	-	-	-	971	48	-
2b.1.1.13	HVAC - Chem & Radiation Prot. Fac.	-	19	-	-	-	-	-	3	22	-	-	22	-	-	-	-	-	-	549	-
2b.1.1.14	HVAC - Chem & Radiation Prot. Fac.-RCA	-	36	1	3	58	-	-	18	116	116	-	-	619	-	-	-	-	25,145	752	-
2b.1.1.15	HVAC - Containment	-	275	18	37	540	155	-	196	1,219	1,219	-	-	5,803	707	-	-	-	299,070	6,611	-
2b.1.1.16	HVAC - Intake Structure	-	17	-	-	-	-	-	3	19	-	-	19	-	-	-	-	-	-	529	-
2b.1.1.17	HVAC - Office/Cafeteria Addition	-	12	-	-	-	-	-	2	13	-	-	13	-	-	-	-	-	-	353	-
2b.1.1.18	HVAC - Rad Processing	-	89	2	8	159	-	-	48	306	306	-	-	1,714	-	-	-	-	69,606	2,057	-
2b.1.1.19	HVAC - Tech Support Center	-	12	-	-	-	-	-	2	13	-	-	13	-	-	-	-	-	-	349	-
2b.1.1.20	HVAC - Turbine Bldg	-	114	-	-	-	-	-	17	131	-	-	131	-	-	-	-	-	-	3,561	-
2b.1.1.21	Instrument Air	-	6	-	-	-	-	-	1	7	-	-	7	-	-	-	-	-	-	188	-
2b.1.1.22	Instrument Air-RCA	-	27	0	1	16	-	-	9	54	54	-	-	175	-	-	-	-	7,091	651	-
2b.1.1.23	Nitro/Hydro/Methane/Propane & Oxygen	-	1	-	-	-	-	-	0	1	-	-	1	-	-	-	-	-	-	26	-
2b.1.1.24	Nitro/Hydro/Methane/Propane & Oxygen-RCA	-	5	0	1	14	-	-	3	24	24	-	-	155	-	-	-	-	6,282	116	-
2b.1.1.25	PH Neutralization	-	65	3	6	71	39	-	38	222	222	-	-	765	177	-	-	-	46,938	1,585	-
2b.1.1.26	Post Accident Sampling	-	63	2	2	20	14	-	23	124	124	-	-	219	65	-	-	-	14,755	1,601	-
2b.1.1.27	Potable Water	-	16	-	-	-	-	-	2	19	-	-	19	-	-	-	-	-	-	476	-
2b.1.1.28	Potable Water-RCA	-	23	0	1	22	-	-	9	56	56	-	-	237	-	-	-	-	9,606	507	-
2b.1.1.29	Primary Plant Sampling	-	79	3	3	21	29	-	31	167	167	-	-	230	134	-	-	-	21,359	1,995	-
2b.1.1.30	Raw Water	-	59	-	-	-	-	-	9	68	-	-	68	-	-	-	-	-	-	1,705	-
2b.1.1.31	Raw Water-RCA	5	20	1	3	57	-	-	16	101	101	-	-	608	-	-	-	-	24,689	611	-
2b.1.1.32	Reactor Coolant Misc	15	36	3	2	15	26	-	26	123	123	-	-	160	142	-	-	-	17,290	1,193	-
2b.1.1.33	Safety Injection & Containment Spray	-	2,222	118	289	4,784	694	-	1,502	9,609	9,609	-	-	51,446	3,508	-	-	-	2,373,616	55,568	-
2b.1.1.34	Service Water	-	5	-	-	-	-	-	1	5	-	-	5	-	-	-	-	-	-	142	-
2b.1.1.35	Waste Disposal	1,023	900	65	64	476	685	-	995	4,209	4,209	-	-	5,115	3,378	-	-	-	488,575	45,548	-
2b.1.1	Totals	1,346	13,020	377	929	15,784	1,883	-	6,606	39,945	36,070	-	3,875	169,723	9,242	-	-	-	7,664,192	363,119	-
2b.1.2	Scaffolding in support of decommissioning	-	766	11	5	84	11	-	209	1,087	1,087	-	-	819	51	-	-	-	41,451	21,607	-
Decontamination of Site Buildings																					
2b.1.3.1	Containment Building	1,012	565	77	91	157	771	-	885	3,557	3,557	-	-	1,691	5,882	-	-	-	627,847	38,374	-
2b.1.3.2	Auxiliary Building	629	337	52	63	37	209	-	471	1,798	1,798	-	-	398	3,920	-	-	-	407,657	23,001	-
2b.1.3.3	Radwaste Building	69	31	6	7	7	23	-	51	194	194	-	-	70	439	-	-	-	46,433	2,395	-
2b.1.3	Totals	1,710	933	134	160	201	1,003	-	1,407	5,548	5,548	-	-	2,159	10,241	-	-	-	1,081,937	63,771	-
2b.1	Subtotal Period 2b Activity Costs	3,056	14,719	523	1,094	16,069	2,897	-	8,222	46,581	42,706	-	3,875	172,702	19,534	-	-	-	8,787,581	448,496	-
Period 2b Collateral Costs																					
2b.3.1	Process liquid waste	192	-	79	450	-	724	-	353	1,798	1,798	-	-	-	1,837	-	-	-	137,121	358	-
2b.3.2	Small tool allowance	-	231	-	-	-	-	-	35	265	265	-	-	-	-	-	-	-	-	-	-
2b.3.3	MPCs and Overpacks	-	-	-	-	-	-	15,909	-	15,909	-	15,909	-	-	-	-	-	-	-	-	-
2b.3.4	Spent Fuel Loading and Handling	-	-	-	-	-	-	3,561	-	3,561	-	3,561	-	-	-	-	-	-	-	-	-
2b.3	Subtotal Period 2b Collateral Costs	192	231	79	450	-	724	19,470	387	21,533	2,063	19,470	-	-	1,837	-	-	-	137,121	358	-
Period 2b Period-Dependent Costs																					
2b.4.1	Decon supplies	689	-	-	-	-	-	-	172	861	861	-	-	-	-	-	-	-	-	-	-
2b.4.2	Insurance	-	-	-	-	-	-	1,162	116	1,278	1,278	-	-	-	-	-	-	-	-	-	-
2b.4.3	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C
Fort Calhoun Station
DECON Decommissioning Cost Estimate
(thousands of 2007 Dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours	
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet				
Period 2b Period-Dependent Costs (continued)																						
2b.4.4	Health physics supplies	-	2,055	-	-	-	-	-	514	2,569	2,569	-	-	-	-	-	-	-	-	-	-	-
2b.4.5	Heavy equipment rental	-	3,650	-	-	-	-	-	548	4,198	4,198	-	-	-	-	-	-	-	-	-	-	-
2b.4.6	Disposal of DAW generated	-	-	113	42	-	282	-	88	525	525	-	-	-	6,384	-	-	-	-	127,677	216	-
2b.4.7	Plant energy budget	-	-	-	-	-	-	2,049	307	2,357	2,357	-	-	-	-	-	-	-	-	-	-	-
2b.4.8	NRC Fees	-	-	-	-	-	-	889	89	978	978	-	-	-	-	-	-	-	-	-	-	-
2b.4.9	Emergency Planning Fees	-	-	-	-	-	-	1,162	116	1,278	-	1,278	-	-	-	-	-	-	-	-	-	-
2b.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	1,906	286	2,192	-	2,192	-	-	-	-	-	-	-	-	-	-
2b.4.11	Radwaste Processing Equipment/Services	-	-	-	-	-	-	480	72	552	552	-	-	-	-	-	-	-	-	-	-	-
2b.4.12	ISFSI Operating Costs	-	-	-	-	-	-	13,017	-	13,017	-	13,017	-	-	-	-	-	-	-	-	-	-
2b.4.13	Security Staff Cost	-	-	-	-	-	-	14,594	2,189	16,783	16,783	-	-	-	-	-	-	-	-	-	-	340,827
2b.4.14	Utility Staff Cost	-	-	-	-	-	-	61,715	9,257	70,972	70,972	-	-	-	-	-	-	-	-	-	-	1,064,243
2b.4	Subtotal Period 2b Period-Dependent Costs	689	5,705	113	42	-	282	96,974	13,754	117,559	101,071	16,488	-	-	6,384	-	-	-	-	127,677	216	1,405,070
2b.0	TOTAL PERIOD 2b COST	3,937	20,655	715	1,585	16,069	3,904	116,444	22,364	185,673	145,840	35,958	3,875	172,702	27,755	-	-	-	-	9,052,379	449,070	1,405,070
PERIOD 2c - Decontamination Following Wet Fuel Storage																						
Period 2c Direct Decommissioning Activities																						
2c.1.1	Remove spent fuel racks	266	27	77	26	-	443	-	262	1,100	1,100	-	-	-	2,022	-	-	-	-	181,439	789	-
Disposal of Plant Systems																						
2c.1.2.1	Electrical - Contaminated	-	825	15	45	814	51	-	349	2,099	2,099	-	-	8,755	233	-	-	-	-	376,459	20,798	-
2c.1.2.2	HVAC - Auxiliary	-	298	13	35	612	57	-	187	1,202	1,202	-	-	6,576	262	-	-	-	-	290,501	6,873	-
2c.1.2.3	Service Water-RCA	-	13	0	1	13	-	-	5	33	33	-	-	142	-	-	-	-	-	5,775	285	-
2c.1.2.4	Spent Fuel Pool Cooling	113	151	11	12	56	152	-	143	638	638	-	-	599	698	-	-	-	-	86,750	5,532	-
2c.1.2	Totals	113	1,287	38	93	1,495	261	-	685	3,972	3,972	-	-	16,073	1,192	-	-	-	-	759,486	33,488	-
Decontamination of Site Buildings																						
2c.1.3.1	Spent Fuel Pool Area (Decon)	533	590	10	16	193	36	-	455	1,832	1,832	-	-	2,072	497	-	-	-	-	133,220	26,870	-
2c.1.3	Totals	533	590	10	16	193	36	-	455	1,832	1,832	-	-	2,072	497	-	-	-	-	133,220	26,870	-
2c.1.4	Scaffolding in support of decommissioning	-	153	2	1	17	2	-	42	217	217	-	-	164	10	-	-	-	-	8,290	4,321	-
2c.1	Subtotal Period 2c Activity Costs	911	2,057	127	136	1,704	741	-	1,444	7,121	7,121	-	-	18,309	3,721	-	-	-	-	1,082,434	65,469	-
Period 2c Collateral Costs																						
2c.3.1	Process liquid waste	78	-	32	182	-	293	-	143	727	727	-	-	-	744	-	-	-	-	55,435	145	-
2c.3.2	Small tool allowance	-	39	-	-	-	-	-	6	44	44	-	-	-	-	-	-	-	-	-	-	-
2c.3.3	Decommissioning Equipment Disposition	-	-	83	44	618	82	-	128	955	955	-	-	6,000	373	-	-	-	-	303,507	88	-
2c.3	Subtotal Period 2c Collateral Costs	78	39	115	226	618	374	-	277	1,727	1,727	-	-	6,000	1,117	-	-	-	-	358,942	233	-
Period 2c Period-Dependent Costs																						
2c.4.1	Decon supplies	84	-	-	-	-	-	-	21	105	105	-	-	-	-	-	-	-	-	-	-	-
2c.4.2	Insurance	-	-	-	-	-	-	261	26	287	287	-	-	-	-	-	-	-	-	-	-	-
2c.4.3	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2c.4.4	Health physics supplies	-	345	-	-	-	-	-	86	431	431	-	-	-	-	-	-	-	-	-	-	-
2c.4.5	Heavy equipment rental	-	821	-	-	-	-	-	123	944	944	-	-	-	-	-	-	-	-	-	-	-
2c.4.6	Disposal of DAW generated	-	-	29	11	-	73	-	23	135	135	-	-	-	1,640	-	-	-	-	32,804	55	-
2c.4.7	Plant energy budget	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	-	-
2c.4.8	NRC Fees	-	-	-	-	-	-	200	20	220	220	-	-	-	-	-	-	-	-	-	-	-
2c.4.9	Emergency Planning Fees	-	-	-	-	-	-	116	12	128	-	128	-	-	-	-	-	-	-	-	-	-
2c.4.10	Radwaste Processing Equipment/Services	-	-	-	-	-	-	216	32	248	248	-	-	-	-	-	-	-	-	-	-	-
2c.4.11	ISFSI Operating Costs	-	-	-	-	-	-	2,928	-	2,928	-	2,928	-	-	-	-	-	-	-	-	-	-
2c.4.12	Security Staff Cost	-	-	-	-	-	-	2,216	332	2,548	2,548	-	-	-	-	-	-	-	-	-	-	40,280
2c.4.13	Utility Staff Cost	-	-	-	-	-	-	9,816	1,472	11,288	11,288	-	-	-	-	-	-	-	-	-	-	165,360
2c.4	Subtotal Period 2c Period-Dependent Costs	84	1,166	29	11	-	73	15,998	2,185	19,545	16,489	3,056	-	-	1,640	-	-	-	-	32,804	55	205,640

Table C
Fort Calhoun Station
DECON Decommissioning Cost Estimate
(thousands of 2007 Dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
2c.0	TOTAL PERIOD 2c COST	1,073	3,261	272	372	2,323	1,188	15,998	3,905	28,393	25,337	3,056	-	24,309	6,478	-	-	-	1,474,180	65,757	205,640
PERIOD 2e - License Termination																					
Period 2e Direct Decommissioning Activities																					
2e.1.1	ORISE confirmatory survey	-	-	-	-	-	-	143	43	186	186	-	-	-	-	-	-	-	-	-	-
2e.1.2	Terminate license	-	-	-	-	-	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-
2e.1	Subtotal Period 2e Activity Costs	-	-	-	-	-	-	143	43	186	186	-	-	-	-	-	-	-	-	-	-
Period 2e Additional Costs																					
2e.2.1	License termination survey	-	-	-	-	-	-	5,042	1,513	6,555	6,555	-	-	-	-	-	-	-	-	110,657	-
2e.2	Subtotal Period 2e Additional Costs	-	-	-	-	-	-	5,042	1,513	6,555	6,555	-	-	-	-	-	-	-	-	110,657	-
Period 2e Period-Dependent Costs																					
2e.4.1	Insurance	-	-	-	-	-	-	319	32	351	351	-	-	-	-	-	-	-	-	-	-
2e.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2e.4.3	Health physics supplies	-	498	-	-	-	-	-	124	622	622	-	-	-	-	-	-	-	-	-	-
2e.4.4	Disposal of DAW generated	-	-	6	2	-	15	-	5	28	28	-	-	-	346	-	-	-	6,928	12	-
2e.4.5	Plant energy budget	-	-	-	-	-	-	158	24	182	182	-	-	-	-	-	-	-	-	-	-
2e.4.6	NRC Fees	-	-	-	-	-	-	257	26	283	283	-	-	-	-	-	-	-	-	-	-
2e.4.7	Emergency Planning Fees	-	-	-	-	-	-	149	15	164	-	164	-	-	-	-	-	-	-	-	-
2e.4.8	ISFSI Operating Costs	-	-	-	-	-	-	3,764	-	3,764	-	3,764	-	-	-	-	-	-	-	-	-
2e.4.9	Security Staff Cost	-	-	-	-	-	-	2,819	423	3,242	3,242	-	-	-	-	-	-	-	-	-	50,700
2e.4.10	Utility Staff Cost	-	-	-	-	-	-	7,879	1,182	9,061	9,061	-	-	-	-	-	-	-	-	-	127,140
2e.4	Subtotal Period 2e Period-Dependent Costs	-	498	6	2	-	15	15,347	1,830	17,699	13,770	3,929	-	-	346	-	-	-	6,928	12	177,840
2e.0	TOTAL PERIOD 2e COST	-	498	6	2	-	15	20,532	3,386	24,439	20,510	3,929	-	-	346	-	-	-	6,928	110,669	177,840
PERIOD 2 TOTALS		5,722	44,442	9,481	6,668	25,599	28,461	211,599	59,001	390,972	330,947	55,319	4,706	278,239	66,349	4,791	1,033	-	17,676,680	811,882	2,596,690
PERIOD 3b - Site Restoration																					
Period 3b Direct Decommissioning Activities																					
Demolition of Remaining Site Buildings																					
3b.1.1.1	Containment Building	-	2,083	-	-	-	-	-	312	2,395	-	-	2,395	-	-	-	-	-	-	32,873	-
3b.1.1.2	Administration Building	-	79	-	-	-	-	-	12	91	-	-	91	-	-	-	-	-	-	1,792	-
3b.1.1.3	Auxiliary Building	-	2,115	-	-	-	-	-	317	2,432	-	-	2,432	-	-	-	-	-	-	31,927	-
3b.1.1.4	Chemistry & Radiation Protection Fac.	-	166	-	-	-	-	-	25	191	-	-	191	-	-	-	-	-	-	3,596	-
3b.1.1.5	Intake Building	-	110	-	-	-	-	-	17	127	-	-	127	-	-	-	-	-	-	2,118	-
3b.1.1.6	Maintenance Shop	-	176	-	-	-	-	-	26	202	-	-	202	-	-	-	-	-	-	3,943	-
3b.1.1.7	Mausoleum	-	97	-	-	-	-	-	15	112	-	-	112	-	-	-	-	-	-	1,902	-
3b.1.1.8	Original Steam Generator Storage	-	205	-	-	-	-	-	31	235	-	-	235	-	-	-	-	-	-	3,537	-
3b.1.1.9	Radwaste Building	-	347	-	-	-	-	-	52	399	-	-	399	-	-	-	-	-	-	7,261	-
3b.1.1.10	Security Building	-	60	-	-	-	-	-	9	69	-	-	69	-	-	-	-	-	-	1,331	-
3b.1.1.11	Service Building	-	240	-	-	-	-	-	36	276	-	-	276	-	-	-	-	-	-	5,058	-
3b.1.1.12	Technical Support Center	-	86	-	-	-	-	-	13	99	-	-	99	-	-	-	-	-	-	1,703	-
3b.1.1.13	Turbine Building	-	728	-	-	-	-	-	109	838	-	-	838	-	-	-	-	-	-	15,313	-
3b.1.1.14	Turbine Pedestal	-	496	-	-	-	-	-	74	571	-	-	571	-	-	-	-	-	-	7,216	-
3b.1.1.15	Warehouse	-	235	-	-	-	-	-	35	270	-	-	270	-	-	-	-	-	-	4,202	-
3b.1.1	Totals	-	7,222	-	-	-	-	-	1,083	8,306	-	-	8,306	-	-	-	-	-	-	123,772	-
Site Closeout Activities																					
3b.1.2	Remove Rubble	-	2,206	-	-	-	-	-	331	2,537	-	-	2,537	-	-	-	-	-	-	2,049	-
3b.1.3	Grade & landscape site	-	80	-	-	-	-	-	12	92	-	-	92	-	-	-	-	-	-	284	-
3b.1.4	Final report to NRC	-	-	-	-	-	-	105	16	121	121	-	-	-	-	-	-	-	-	-	1,560
3b.1	Subtotal Period 3b Activity Costs	-	9,509	-	-	-	-	105	1,442	11,057	121	-	10,936	-	-	-	-	-	-	126,105	1,560

Table C
Fort Calhoun Station
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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours	
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet				
Period 3b Additional Costs																						
3b.2.1	Intake cofferdam	-	691	-	-	-	-	-	104	794	-	-	794	-	-	-	-	-	-	-	8,466	-
3b.2.2	Concrete processing	-	280	-	-	-	-	7	43	331	-	-	331	-	-	-	-	-	-	-	1,937	-
3b.2	Subtotal Period 3b Additional Costs	-	971	-	-	-	-	7	147	1,125	-	-	1,125	-	-	-	-	-	-	-	10,403	-
Period 3b Collateral Costs																						
3b.3.1	Small tool allowance	-	69	-	-	-	-	-	10	80	-	-	80	-	-	-	-	-	-	-	-	-
3b.3	Subtotal Period 3b Collateral Costs	-	69	-	-	-	-	-	10	80	-	-	80	-	-	-	-	-	-	-	-	-
Period 3b Period-Dependent Costs																						
3b.4.1	Insurance	-	-	-	-	-	-	464	46	510	-	510	-	-	-	-	-	-	-	-	-	-
3b.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3b.4.3	Heavy equipment rental	-	2,105	-	-	-	-	-	316	2,420	-	-	2,420	-	-	-	-	-	-	-	-	-
3b.4.4	Plant energy budget	-	-	-	-	-	-	115	17	132	0	40	93	-	-	-	-	-	-	-	-	-
3b.4.5	NRC ISFSI Fees	-	-	-	-	-	-	235	23	258	-	258	-	-	-	-	-	-	-	-	-	-
3b.4.6	Emergency Planning Fees	-	-	-	-	-	-	217	22	239	-	239	-	-	-	-	-	-	-	-	-	-
3b.4.7	ISFSI Operating Costs	-	-	-	-	-	-	5,475	-	5,475	-	5,475	-	-	-	-	-	-	-	-	-	-
3b.4.8	Security Staff Cost	-	-	-	-	-	-	4,100	615	4,714	(0)	4,149	566	-	-	-	-	-	-	-	-	73,729
3b.4.9	Utility Staff Cost	-	-	-	-	-	-	7,932	1,190	9,121	0	912	8,209	-	-	-	-	-	-	-	-	129,876
3b.4	Subtotal Period 3b Period-Dependent Costs	-	2,105	-	-	-	-	18,537	2,229	22,871	0	11,583	11,288	-	-	-	-	-	-	-	-	203,604
3b.0	TOTAL PERIOD 3b COST	-	12,654	-	-	-	-	18,650	3,829	35,132	121	11,583	23,429	-	-	-	-	-	-	-	136,508	205,164
PERIOD 3c - Fuel Storage Operations/Shipping																						
Period 3c Direct Decommissioning Activities																						
Period 3c Period-Dependent Costs																						
3c.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3c.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3c.4.3	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3c.4.4	NRC ISFSI Fees	-	-	-	-	-	-	3,654	365	4,020	-	4,020	-	-	-	-	-	-	-	-	-	-
3c.4.5	ISFSI Operating Costs	-	-	-	-	-	-	85,366	-	85,366	-	85,366	-	-	-	-	-	-	-	-	-	-
3c.4.6	Utility Staff Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3c.4	Subtotal Period 3c Period-Dependent Costs	-	-	-	-	-	-	89,020	365	89,385	-	89,385	-	-	-	-	-	-	-	-	-	-
3c.0	TOTAL PERIOD 3c COST	-	-	-	-	-	-	89,020	365	89,385	-	89,385	-	-	-	-	-	-	-	-	-	-
PERIOD 3d - GTCC shipping																						
Period 3d Direct Decommissioning Activities																						
Nuclear Steam Supply System Removal																						
3d.1.1.1	Vessel & Internals GTCC Disposal	-	-	275	-	-	2,330	-	377	2,982	2,982	-	-	-	-	-	-	-	-	122	26,189	-
3d.1.1	Totals	-	-	275	-	-	2,330	-	377	2,982	2,982	-	-	-	-	-	-	-	-	122	26,189	-
3d.1	Subtotal Period 3d Activity Costs	-	-	275	-	-	2,330	-	377	2,982	2,982	-	-	-	-	-	-	-	-	122	26,189	-
Period 3d Period-Dependent Costs																						
3d.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3d.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3d.4.3	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3d.4.4	NRC ISFSI Fees	-	-	-	-	-	-	9	1	10	-	10	-	-	-	-	-	-	-	-	-	-
3d.4.5	ISFSI Operating Costs	-	-	-	-	-	-	207	-	207	-	207	-	-	-	-	-	-	-	-	-	-
3d.4.6	Utility Staff Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3d.4	Subtotal Period 3d Period-Dependent Costs	-	-	-	-	-	-	216	1	217	-	217	-	-	-	-	-	-	-	-	-	-

Table C
Fort Calhoun Station
DECON Decommissioning Cost Estimate
(thousands of 2007 Dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
3d.0	TOTAL PERIOD 3d COST	-	-	275	-	-	2,330	216	378	3,199	2,982	217	-	-	-	-	-	122	26,189	-	-
PERIOD 3e - ISFSI Decontamination																					
Period 3e Direct Decommissioning Activities																					
Period 3e Additional Costs																					
3e.2.1	ISFSI license termination	-	-	-	-	-	-	4,033	-	4,033	-	4,033	-	-	-	-	-	-	-	-	-
3e.2	Subtotal Period 3e Additional Costs	-	-	-	-	-	-	4,033	-	4,033	-	4,033	-	-	-	-	-	-	-	-	-
Period 3e Period-Dependent Costs																					
3e.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3e.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3e.4.3	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3e.4.4	NRC ISFSI Fees	-	-	-	-	-	-	73	7	80	-	80	-	-	-	-	-	-	-	-	-
3e.4.5	ISFSI Operating Costs	-	-	-	-	-	-	1,699	-	1,699	-	1,699	-	-	-	-	-	-	-	-	-
3e.4.6	Utility Staff Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3e.4	Subtotal Period 3e Period-Dependent Costs	-	-	-	-	-	-	1,771	7	1,779	-	1,779	-	-	-	-	-	-	-	-	-
3e.0	TOTAL PERIOD 3e COST	-	-	-	-	-	-	5,804	7	5,812	-	5,812	-	-	-	-	-	-	-	-	-
PERIOD 3f - ISFSI Site Restoration																					
Period 3f Direct Decommissioning Activities																					
Period 3f Additional Costs																					
3f.2.1	ISFSI demolition	-	-	-	-	-	-	1,008	-	1,008	-	1,008	-	-	-	-	-	-	-	-	-
3f.2	Subtotal Period 3f Additional Costs	-	-	-	-	-	-	1,008	-	1,008	-	1,008	-	-	-	-	-	-	-	-	-
Period 3f Period-Dependent Costs																					
3f.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3f.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3f.4.3	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3f.4.4	ISFSI Operating Costs	-	-	-	-	-	-	842	-	842	-	842	-	-	-	-	-	-	-	-	-
3f.4.5	Utility Staff Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3f.4	Subtotal Period 3f Period-Dependent Costs	-	-	-	-	-	-	842	-	842	-	842	-	-	-	-	-	-	-	-	-
3f.0	TOTAL PERIOD 3f COST	-	-	-	-	-	-	1,851	-	1,851	-	1,851	-	-	-	-	-	-	-	-	-
PERIOD 3 TOTALS		-	12,654	275	-	-	2,330	115,541	4,579	135,379	3,103	108,847	23,429	-	-	-	-	122	26,189	136,508	205,164
TOTAL COST TO DECOMMISSION		8,196	61,890	9,841	7,270	25,599	33,896	427,562	77,757	652,009	433,300	189,739	28,971	278,239	109,983	6,093	1,033	122	18,431,700	987,495	3,836,167

Table C
Fort Calhoun Station
DECON Decommissioning Cost Estimate
(thousands of 2007 Dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			

TOTAL COST TO DECOMMISSION WITH 13.54% CONTINGENCY:					\$652,009	thousands of 2007 dollars															
TOTAL NRC LICENSE TERMINATION COST IS 66.46% OR:					\$433,300	thousands of 2007 dollars															
SPENT FUEL MANAGEMENT COST IS 29.1% OR:					\$189,739	thousands of 2007 dollars															
NON-NUCLEAR DEMOLITION COST IS 4.44% OR:					\$28,971	thousands of 2007 dollars															
TOTAL LOW-LEVEL RADIOACTIVE WASTE VOLUME BURIED (EXCLUDING GTCC):					117,109	cubic feet															
TOTAL GREATER THAN CLASS C RADWASTE VOLUME GENERATED:					122	cubic feet															
TOTAL SCRAP METAL REMOVED:					26,208	tons															
TOTAL CRAFT LABOR REQUIREMENTS:					987,234	man-hours															

End Notes:
n/a - indicates that this activity not charged as decommissioning expense.
a - indicates that this activity performed by decommissioning staff.
0 - indicates that this value is less than 0.5 but is non-zero.
a cell containing " - " indicates a zero value

**TABLE D-1
FORT CALHOUN STATION
SPENT FUEL MANAGEMENT
(thousands of 2007 dollars)**

	Base	Contingency	Total
Period 1			
MPCs and Overpacks, Period 1a	8,701	-	8,701
Spent Fuel Loading and Handling, Period 1a	2,206	-	2,206
ISFSI Operating Costs, Period 1a	3,275	-	3,275
Emergency Planning Fees, Period 1a	450	45	495
Spent Fuel Pool O&M, Period 1a	738	111	849
MPCs and Overpacks, Period 1b	5,460	-	5,460
Spent Fuel Loading and Handling, Period 1b	1,370	-	1,370
ISFSI Operating Costs, Period 1b	2,541	-	2,541
Emergency Planning Fees, Period 1b	227	23	249
Spent Fuel Pool O&M, Period 1b	372	56	428
Period 2			
MPCs and Overpacks, Period 2a	2,543	-	2,543
Spent Fuel Loading and Handling, Period 2a	780	-	780
ISFSI Operating Costs, Period 2a	7,147	-	7,147
Emergency Planning Fees, Period 2a	638	64	702
Spent Fuel Pool O&M, Period 2a	1,047	157	1,204
MPCs and Overpacks, Period 2b	15,909	-	15,909
Spent Fuel Loading and Handling, Period 2b	3,561	-	3,561
ISFSI Operating Costs, Period 2b	13,017	-	13,017
Emergency Planning Fees, Period 2b	1,162	116	1,278
Spent Fuel Pool O&M, Period 2b	1,906	286	2,192
ISFSI Operating Costs, Period 2c	2,928	-	2,928
Emergency Planning Fees, Period 2c	116	12	128
ISFSI Operating Costs, Period 2e	3,764	-	3,764
Emergency Planning Fees, Period 2e	149	15	164
Period 3			
Insurance, Period 3b	464	46	510
Plant Energy Budget, Period 3b	35	5	40
NRC ISFSI Fees, Period 3b	235	23	258
Emergency Planning Fees, Period 3b	217	22	239
ISFSI Operating Costs, Period 3b	5,475	-	5,475
Security Staff, Period 3b	3,608	541	4,149

**TABLE D-1 (continued)
FORT CALHOUN STATION
SPENT FUEL MANAGEMENT
(thousands of 2007 dollars)**

	Base	Contingency	Total
Period 3 (continued)			
Utility Staff, Period 3b	793	119	912
ISFSI Operating Costs, Period 3c	85,366	-	85,366
NRC ISFSI Fees, Period 3c	3,654	365	4,020
ISFSI Operating Costs, Period 3d	207	-	207
NRC ISFSI Fees, Period 3d	9	1	10
ISFSI License Termination, Period 3e	4,033	-	4,033
ISFSI Operating Costs, Period 3e	1,699	-	1,699
NRC ISFSI Fees, Period 3e	73	7	80
ISFSI demolition, Period 3f	1,008	-	1,008
ISFSI Operating Costs, Period 3f	842	-	842
Total Spent Fuel Storage Cost	187,725	2,014	189,739

**TABLE D-2
FORT CALHOUN STATION
COST ALLOCATIONS
(thousands of 2007 dollars)**

	Base	Contingency	Total
Non-Nuclear Costs			
Period 1	830	6	836
Period 2	4,675	31	4,706
Period 3	23,272	156	23,429
Total	28,777	193	28,971
Nuclear or License Termination Cost			
Total Decommissioning Cost	574,253	77,757	652,009
Less Non-Nuclear [above]	28,777	193	28,971
Less Spent Fuel Management [Table D-1]	187,725	2,014	189,739
Total Nuclear or License Termination Cost	357,750	75,549	433,300
Cost Summary			
Nuclear	357,750	75,549	433,300
Non-Nuclear	28,777	193	28,971
Fuel Management (Nuclear)	187,725	2,014	189,739
Total	574,253	77,757	652,009

**TABLE D-3
FORT CALHOUN STATION
ESCALATION ELEMENTS
(thousands of 2007 dollars)**

Cost Elements	Escalation Category	Cost (w/contingency)
Decon Craft Labor	Labor	6,537
Decon Equipment & Materials	Labor	4,904
Removal Craft Labor	Labor	38,395
Removal Equipment & Materials	Labor	40,099
Packaging Craft Labor	Labor	4,031
Packaging Equipment & Materials	Labor	7,433
Transportation	Energy	8,505
Low-Level Radioactive Waste Disposal	Burial	43,718
Greater-than-Class C Waste Disposal	Other	2,679
Off-Site Waste Processing	Burial	29,438
Decommissioning Management Staff	Labor	185,858
Non-craft Contract Staff / Engineering	Labor	8,928
Insurance	Other	4,888
ISFSI Capital Expense/Site Alterations	Labor	32,613
Other ISFSI-related	Labor	147,736
Spent Fuel Pool O&M	Labor	4,673
NRC and EP Fees	Other	2,445
Energy	Energy	7,036
Security (Decommissioning)	Labor	43,424
Characterization and Licensing Surveys	Labor	8,971
Miscellaneous Equipment	Labor	5,937
Spent Fuel Pool Isolation	Labor	10,503
Other	Other	3,255
Total		652,009

Escalation of Site-Specific Cost Estimate – Dismantlement Period

**OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION UNIT NO. 1
2011 BIENNIAL DECOMMISSIONING FUNDING STATUS REPORT TO NRC
ESCALATION OF SITE-SPECIFIC COST ESTIMATE - DISMANTLEMENT PERIOD
\$ in millions**

<u>YEAR</u>	<u>COST IN 2010 \$</u>
2033	\$21.2
2034	\$76.2
2035	\$108.3
2036	\$86.4
2037	\$62.2
2038	\$62.2
2039	\$44.0
2040	\$13.2
2041	\$0.1
2058	<u>\$3.4</u>
	\$477.2

Fort Calhoun Station Unit No.1 Decommissioning Fund Trust Agreement

Fort Calhoun Station Unit No. 1

Decommissioning Funding Plan
(the "1990 Plan")

Fort Calhoun Station Unit No. 1
Decommissioning Funding Plan (the "1990 Plan")

Section 1 - Introduction

Omaha Public Power District's (the "District") Fort Calhoun Nuclear Power Generating Station Unit No. 1's (the "Station") current operating license (the "License") issued by the Nuclear Regulatory Commission (the "NRC") expires in the year 2008. For planning purposes, it is assumed the Station will be retired at that time. In order to terminate the License, it will be necessary to Decommission the Station which the NRC defines as: "to remove [the Station] safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the License" (the "Decommissioning").

The District established a formal plan for the funding of the Decommissioning of the Station in February, 1983 (the "1983 Plan"). The 1983 Plan resulted from the efforts of an internal task force and a nationally recognized consultant. The District's Board of Directors have implemented the 1983 Plan and its current status is detailed further below.

Section 2 - NRC Financial Regulations For Decommissioning

The NRC issued regulations in June 1988 and a subsequent Regulatory Guide setting forth financial criteria for Decommissioning licensed nuclear facilities. This 1990 Plan addresses those regulations and criteria.

Section 3 - NRC Decommissioning Estimate - Fort Calhoun Station Unit No. 1

NRC regulation 10 CFR 50.75(c) elaborates on three items to provide adequate funding for Decommissioning.

First, a Minimum Decommissioning Amount for Decommissioning licensed facilities is calculated based on a pressurized water reactor ("PWR") and on the facility's megawatt thermal rating ("Mwt"). The Station is a PWR of 1500 Mwt rating. The computation for the Minimum Decommissioning Amount in 1986 dollars for the Station is as follows:

(\$75 million + \$8800 P),
where P equals the reactor's Mwt rating

\$75 million + \$8800(1500 Mwt)

\$75 million - \$13.2 million = \$61.8 million

Second, the Minimum Decommissioning Amount is to be adjusted annually using the following formula.

$$(\text{Minimum Decommissioning Amount}) \times (.65L + .13E + .22B)$$

The "L", "E" and "B" in the formula are escalation factors for Labor, Energy, and Waste Burial, respectively. Further, the Energy Index is composed of two factors - Industrial Power and Light Fuel Oils weighted as indicated. For the Station, the January 1986 NRC Minimum Decommissioning Amount of \$88.2 million is escalated as follows:

Indices

Labor

U. S. Department of Labor - Bureau of Labor Statistics
Employment Cost Index

Private Nonfarm Workers	*12-88	<u>138.0</u>	= .104	increase
Compensation (Midwest Region)	1-86	125.0		

*index available on quarterly basis only

Energy

U. S. Department of Labor - Bureau of Labor Statistics
Producer Price Index

Industrial Power	1-89	<u>128.2</u>	= .1085	increase
(West North Central Region)	1-86	115.65		

Light Fuel Oils	1-89	<u>54.9</u>	= .3305	decrease
	1-86	82.0		

Application of the formula to 1-1989 leads to =

$$\text{Energy} = ((128.2/115.65) \times .58) + ((54.9/82.0) \times .42)$$

$$\text{Energy} = .6429 + .2812$$

$$\text{Energy} = .9241 \text{ a decrease of } 7.59\%$$

<u>Waste Burial</u>	Washington Index	1-88	<u>1.01</u>	= .01	increase
NUREG-1307		1-86	1.00		

	Nevada Index	1-88	<u>.959</u>	= .041	decrease
		1-86	1.000		

	South Carolina Index	1-88	<u>1.536</u>	= .536	increase
		1-86	1.000		

Due to three Waste Burial indices provided in the NRC regulations, three separate escalated cost formulas were developed.

Washington Index

$$\begin{aligned} \$88.2 \text{ million} + ((\$88.2 \text{ million})(.65(.104) + .13(-.0759) + .22(.01))) = \\ \$ 93,486,000 \end{aligned}$$

Nevada Index

\$88.2 million + ((\$88.2 million)(.65(.104)+.13(-.0759)+.22(-.041))
= \$ 92,496,000

South Carolina Index

\$88.2 million + ((\$88.2 million)(.65(.104)+.13(-.0759)+.22(.536))
= \$103,693,000

An average of the Minimum Decommissioning Amount for the three burial sites results in the following average escalated cost:

Washington Index	= \$ 93,486,000
Nevada Index	= \$ 92,496,000
South Carolina Index	= <u>\$103,693,000</u>
	\$289,675,000
	divided by 3
	=
	\$ 96,558,000

The 1990 Plan will use the average of the three burial site indices in calculating the annual adjustment to the Minimum Decommissioning Amount until such time as a specific site is determined, or upon NRC direction.

Third, a method of providing for financial assurance must be selected. This 1990 Plan provides for the establishment of an external trust fund.

Additionally, five years prior to the projected end of the Station's operation, a site specific plan will be submitted with an up-to-date estimate of the cost of Decommissioning.

Section 4 - Current Status of the 1983 Plan

The January 1982 estimated Decommissioning cost of \$63 million has been adjusted annually and has received two separate reviews at three-year intervals by the District's external consultant. Accordingly, the January 1989 estimated Decommissioning cost is \$105,400,000. The current Decommissioning Fund Balance (that amount which has been collected from the District's customers plus interest earnings) is herein defined as the "Balance Amount". The Balance Amount is invested in U. S. Treasury Securities as directed by the District's Bond Indenture and will be transferred to the new external Decommissioning trust fund as provided in Section 5.

Section 5 - Annual Deposits to the Decommissioning Trust Fund

To comply with the new NRC regulations, a Trust Agreement is created as Attachment A to this 1990 Plan. The Trust Agreement establishes an external trust fund (the "Fund") for the accumulation of sufficient monies to meet the estimated costs of Decommissioning the Station. Annual deposits to the Fund (the

"Annual Payments") will be calculated as follows:

First Year

The first Annual Payment to be deposited into the Fund will be the greater of the two following:

A. The District's Minimum Decommissioning Cost as determined using the herein defined NRC regulated formula divided by 26 (the years of remaining License life at the time of the 1983 Plan) times 7 (the number of years monies have been funded internally); or

B. The Balance Amount (as herein defined).

The first Annual Payment shall be met by depositing into the Fund, on the Effective Date of the Trust Agreement, such monies and unmatured securities (valued at amortized book cost) now held by the District in the District's presently existing internal Fort Calhoun Station Unit No. 1 Decommissioning Fund pursuant to the 1983 Plan, plus any additional funds, as are necessary to meet this first Annual Payment.

Subsequent Years

The Annual Payment required to be deposited to the Fund by the District for the second and subsequent years during the term of the Trust Agreement is calculated according to the following formula:

Decommissioning Cost Estimate
Revised for the Annual Adjustment
(as determined by NRC regulation 10 CFR 50.75(c))

- A. Equals the Estimated Revised Minimum Decommissioning Amount \$ _____
- B. Less the current balance in the Fund after the remittance of any "Paid Earnings", any "Certification" payments and any "General Withdrawals" (as defined in the Trust Agreement) made in the present year \$ _____
- C. Equals the Uncollected Estimated Minimum Decommissioning Amount \$ _____
- D. Divided by the Station's Remaining Years of Operating Life _____
- E. Equals Amount of Present Year's Annual Payment \$ _____

Section 6 - Normal Plant Life Decommissioning

As indicated in Section 1, the Station's License expires in 2008. That date is used for planning purposes and serves as a basis for this 1990 Plan. The District may apply for an extension of the License expiration date at some future time and in the event such application is made and approved by the NRC, the applicable Sections of this 1990 Plan will be changed accordingly.

This 1990 Plan is designed to cover a normal Decommissioning of the Station. In the event of a premature Decommissioning of the Station, separate financial considerations may become necessary and accordingly a new funding plan would be developed at that time in conformance with NRC direction.

ATTACHMENT "A"

TRUST AGREEMENT

This Trust Agreement, (the "Agreement") dated as of July 2, 1990, by and between Omaha Public Power District, a public corporation and political subdivision of the State of Nebraska (the "District") and The First National Bank of Omaha, a National Bank chartered and doing business by virtue of the laws of the United States of America with its principal place of business in Omaha, Nebraska, as External Fund Trustee (the "Trustee");

WITNESSETH

WHEREAS, the District presently owns and operates the Fort Calhoun Nuclear Power Generating Station Unit No. 1 (the "Station") under Operating License Number DPR-40 (the "License") issued by the Nuclear Regulatory Commission (the "NRC"); and

WHEREAS, the License is expected to expire on June 7, 2008, at which time the District desires to remove the Station safely from service and reduce residual radioactivity to a level that permits termination of the License (the "Decommissioning"); and

WHEREAS, to ensure that sufficient funds are available to pay the costs of Decommissioning the Station, NRC regulations 10 C.F.R. Part 50, as amended from time to time, require the District to establish and maintain an External Trust Fund (hereinafter defined) by depositing funds in an account segregated from the District's assets; and

WHEREAS, Resolution No. 3945 was adopted by the Board of Directors of the District on June 7, 1990, (the "Resolution") which Resolution permits the District to establish such External Trust Fund with the Trustee upon the terms and conditions hereinafter set forth in this Agreement.

NOW THEREFORE, in consideration of the foregoing and the mutual covenants hereinafter set forth, the parties hereto agree as follows:

SECTION 1. RESOLUTION

The Trustee hereby acknowledges receipt of a true and correct copy of the Resolution establishing the Fund (as herein defined).

SECTION 2. ESTABLISHMENT OF FUND

There is hereby established for the benefit of the NRC, the customer-owners of the District and the citizens of the State of Nebraska; and for the purpose of discharging the District's legal obligation to accomplish the Decommissioning, a segregated External Trust Fund designated the "Omaha Public Power District Fort Calhoun Station Decommissioning External Trust Fund" (the "Fund") to be held in the custody of the Trustee. On the Effective Date (hereinafter defined) of the Agreement, there shall be deposited in the Fund, the First Annual Payment (as herein defined). After the date of the aforementioned First Annual Payment, the District shall make periodic additional deposits to the Fund, the frequency of which shall be determined by the District in its sole discretion; except that such additional deposits must be remitted to the Trustee at least annually, and in such amounts which at least equal the Annual Payment (hereinafter defined) required for each twelve (12) month period during the term of the Agreement. The minimum aggregate annual amount of such deposit or deposits required by the Agreement to be deposited in the Fund shall be determined in the manner set forth in Section 4 herein.

SECTION 3. GRANTOR TRUST

The parties hereby acknowledge that the District is an entity exempt from taxation under Section 501(c) of the Internal Revenue Code of 1986, as amended. The parties agree that the Fund herein established is a Grantor Trust pursuant to Section 671 et. seq. of the Internal Revenue Code of 1986, as amended; that the District is the owner of the entire Fund for federal income tax purposes and that the Trustee shall not be required to file a federal income tax return with respect to the Fund for any taxable year

during which the Fund is in existence.

SECTION 4. MINIMUM ANNUAL DEPOSIT

In order to ensure that as of the Termination Date, (hereinafter defined), the Fund will contain sufficient monies to meet estimated costs of Decommissioning, the following computations shall be used to determine the minimum aggregate annual amount (the "Annual Payment") which the District shall be required to deposit into the Fund:

A. First Year. The Annual Payment to be deposited in the Fund during the first twelve (12) month period from the Effective Date (the "First Annual Payment") shall be that amount as calculated pursuant to the formula set forth in Section 5 of the District's Fort Calhoun Station Unit No. 1 Decommissioning Funding Plan (the "1990 Plan").

On the Effective Date, the District shall deposit into, or assign to, the Fund all or that part of such monies and securities then held by the District in the District's presently existing internal Fort Calhoun Station Unit No. 1 Decommissioning Fund as required to meet the First Annual Payment; which monies and securities are delineated in Exhibit "1" attached hereto. Should the funds held in the existing internal Fort Calhoun Station Unit No. 1 Decommissioning Fund be insufficient to meet the First Annual Payment, the District shall make up any such deficiency by an additional deposit or deposits to the Fund during the twelve (12) month period from and after the Effective Date of the Agreement.

B. Subsequent Years. The Annual Payment required to be deposited into the Fund by the District for the second and all subsequent years during the term of the Agreement, shall be determined as set forth in the 1990 Plan. The Trustee hereby acknowledges receipt of the 1990 Plan which is incorporated herein by this reference and made a part hereof. The District and the Trustee hereby acknowledge that the 1990

Plan may be amended from time to time by the NRC, and that any and all such amendments to the 1990 Plan effectuated during the term hereof shall constitute a part of the Agreement.

SECTION 5. TRUSTEE DUTIES

The Trustee hereby establishes the Fund and accepts the cash and securities deposited therein pursuant to the Agreement. The Trustee has the duty to execute the investment of any and all monies held hereunder in the following investments:

A. Any obligations of the United States Government having the backing of the full faith and credit of the United States of America; and/or

B. Any and all investments permitted to be made by Public Power Districts under the laws of the State of Nebraska, as amended from time to time, (collectively the "Permitted Investments").

The Trustee shall exercise its investment duties pursuant to this Section 5 only in accordance with the oral instructions (followed by prompt written confirmation thereof) of the District. The District hereby retains sole authority to determine which among the Permitted Investments the Trustee shall make, and the District hereby agrees to be bound by the terms and conditions of the Agreement when making such investment determinations. Notwithstanding any of the foregoing to the contrary, the District may, in its sole discretion, and at any time during the term of the Agreement, delegate its power to direct the investment of the Fund's assets to an investment manager. Any such investment manager to whom the District may delegate its investment powers granted herein, shall be required to execute and deliver to the Trustee any and all documents as may be necessary to evidence said investment manager's agreement to be bound by all terms and conditions respecting the Permitted Investments contained in this Section 5 of the Agreement. In the event the Trustee follows all such directions received from the District or such investment manager appointed by the District, the Trustee shall not be liable

for any losses incurred by reason of any action taken pursuant to such directions provided such directions are in compliance with the requirements of this Section 5.

The maturity date of any Permitted Investment made pursuant to the Agreement shall not unreasonably extend beyond the Termination Date (hereinafter defined) of the Agreement.

If the District shall so request the Trustee, in writing, income received on the Permitted Investments shall be paid by the Trustee to the District as received (the "Paid Earnings"). All Paid Earnings shall be used by the District first in meeting its Annual Payment due to the Fund. Should the Paid Earnings exceed the Annual Payment due for any year during the term of the Agreement, any such excess may be used by the District for valid corporate purposes.

The Trustee shall submit to the District a written annual accounting of the Fund as of the end of each calendar year during which the Agreement shall be in effect (the "Accounting"). The Accounting, which shall be delivered to the District no later than January 31st of each year during the term hereof, shall include:

A. The balance of the Fund at the close of the last previous Accounting, and all amounts received from whatever source during the period covered by the Accounting;

B. A listing of all disbursements from the Fund;

C. An inventory of all investments held by the Trustee as of the date of the Accounting; and

D. Such other information as the District may, from time to time, request be included in any such Accounting.

A copy of all Accountings shall be submitted by the District to the NRC within thirty (30) days after receipt thereof by the District.

During the term of the Agreement, the Trustee shall give the District (or the District's representatives) full access, during Trustee's normal business hours, to all books and records relating to the Fund, and shall provide the District (or the District's representatives) with all such information regarding the Fund as

the District (or the District's representatives) may reasonably request.

SECTION 6. DECOMMISSIONING EXPENSES

To enable the District to meet Decommissioning expenses as they arise, the District is hereby empowered to make withdrawals from the Fund upon the following terms and conditions:

A. Four (4) times in every twelve (12) month period during the term of the Agreement, the District may submit to the Trustee an itemized written request for Decommissioning funds (the "Certification"). The Certification shall contain the following information and be calculated according to the following formula:

1. a) The total amount of Decommissioning expenditures, if any, actually incurred by the District during the prior three (3) month period,
- b) minus the total aggregate amount received by the District, if any, out of the Fund for Decommissioning purposes during the prior three month period,

EQUALS

- c) The total unfunded Decommissioning expenditures for the prior three (3) month period ("Prior Unfunded Expenditures")

¹\$ _____

PLUS

¹In the event that, during any three (3) month period, the District shall have received monies out of the Fund for Decommissioning purposes in excess of Decommissioning expenses actually incurred during the same period, the Prior Unfunded Expenditures would be a negative number thereby decreasing the Certification Amount received pursuant to any Certification submitted to the Trustee at the end of any such three (3) month period.

2. All expenditures for Decommissioning purposes, if any, which the District reasonably anticipates it shall incur in the ensuing three (3) month period ("Future Unfunded Expenditures") \$ _____

The net of Prior Unfunded Expenditures and Future Unfunded Expenditures shall constitute the "Certification Amount".

All Certifications shall be made by such Treasury Officer(s) as appointed by the District's Board of Directors (the "Treasury Officer") and shall be submitted to the Trustee in the form attached hereto as Exhibit "2". Provided a Certification is in compliance with the requirements of this Section 6, the Trustee shall pay to the District, out of the Fund, the Certification Amount on or before the date specified by the District in any such Certification.

B. Notwithstanding any of the foregoing, should the District be required to make any Decommissioning expenditure, which Decommissioning expenditure should exceed the sum of One Hundred Thousand Dollars (\$100,000.00), and for which prospective provision was not made in any prior Certification to the Trustee, the District may, at any time, submit a "Special Certification" to the Trustee in the same form required for a Certification. Upon receipt of a Special Certification, the Trustee shall pay to the District, out of the Fund, the amount so requested by the Special Certification on or before the date specified by the District in any such Special Certification.

No Certification, except a Special Certification, shall be made to the Trustee prior to the first day of the fourth month from the Effective Date (the "Initial Certification"). All subsequent Certifications shall be made at three month intervals from the date of the Initial Certification.

C. Notwithstanding anything in this Section 6 to the contrary, in the event that the amortized book value of the Fund should exceed the total cost estimate of Decommissioning (as determined pursuant to the NRC regulated formula set

forth in the 1990 Plan as amended) for any year during the term of the Agreement, the District may withdraw such excess funds from the corpus of the Fund to be used by the District for valid corporate purposes (a "General Withdrawal"). All requests for General Withdrawals: (1) shall be submitted to the Trustee in writing specifying the date by which any sums so requested must be received by the District; and (2) shall be made by a Treasury Officer. In no event shall the total amounts received by the District pursuant to General Withdrawals in any year during the term hereof exceed the difference between the adjusted book value of the Fund and the cost estimate of Decommissioning (as calculated pursuant to the NRC Regulated Formula set forth in the 1990 Plan, as amended) for the year in which such General Withdrawals are made.

D. The District shall submit copies of all Certifications, Special Certifications and General Withdrawals to the NRC.

SECTION 7. INDEPENDENT AUDIT

To provide adequate assurance to the NRC that the District and the Fund are in compliance with all NRC Regulations respecting Decommissioning funds, the District shall cause to be conducted an annual audit of the Fund and all transactions relating thereto (the "Annual Audit"). The Annual Audit shall be conducted by either: (1) the District's independent accountants (the "District's Auditor"); or (2) the auditors of the Trustee (the "Trustee's Auditor"). The District shall have sole discretion to determine whether the Annual Audit be conducted by the District's Auditor or the Trustee's Auditor; and all costs of each Annual Audit shall be borne by the District.

Each Annual Audit shall take place in the month immediately following each twelve (12) month period during which the Agreement shall be in effect. In the event the District shall direct the Trustee's Auditor to conduct any Annual Audit, the District shall give the Trustee's Auditor at least sixty (60) days' prior written notice thereof. Reports of all such Annual Audits shall be

submitted to the NRC, the District and the Trustee within sixty (60) days of the completion of each such Annual Audit. Such report shall contain, in addition to an analysis of the Fund and all transactions relating thereto, a certification by the District's Auditor, or the Trustee's Auditor (whichever is applicable), to the NRC that all payments from the Fund by the Trustee to the District were made pursuant to the terms of Sections 5 and 6 herein.

SECTION 8. COMPENSATION OF TRUSTEE

The District shall compensate the Trustee for its performance of the services specified in the Agreement. During the first five (5) years of the term of the Agreement, the Trustee shall be entitled to compensation as follows: year one - \$950.00 per quarter; year two - \$1,200.00 per quarter; year three - \$1,400.00 per quarter; year four - \$1,700.00 per quarter; and year five - \$2,000.00 per quarter. On a quarterly retrospective basis, the Trustee shall submit to the District an invoice for the Trustee's quarterly compensation as set forth in this Section 8, which quarterly compensation includes any and all administrative expenses incurred by the Trustee in connection with the administration of the Fund.

The District shall pay such quarterly invoices no later than thirty (30) days following the end of the applicable calendar quarter or ten (10) days following the receipt by the District of such quarterly invoices, whichever occurs later.

For all successive years that the Agreement shall be in effect, the Trustee shall receive compensation for its services hereunder in such amounts and upon such terms as shall be agreed upon by the parties hereto in writing. In the event that the parties are unable to agree upon the Trustee's compensation for any such successive year, the Trustee shall continue to receive the quarterly compensation for year five as stated in the preceding paragraph of this Section 8 for each such successive year.

SECTION 9. LIMITED USE

Except as provided in Sections 5 and 6 of the Agreement, all monies, deposits, and securities held in the Fund pursuant to the Agreement shall be used solely for the costs of Decommissioning. No principal or income payable to, or to become payable under, the Fund shall vest in the District for any other purposes except those specifically authorized herein. No principal or income of the Fund shall be taken or reached by any legal or equitable process in satisfaction of any debt of the District.

SECTION 10. TERMINATION

This Agreement shall terminate on such date as the Decommissioning shall be completed (the "Termination Date").

Prior to the Termination Date, the District shall submit its final Certification to the Trustee which shall disburse funds to cover final Decommissioning costs. On the Termination Date, the Trust herein established shall terminate, and any amounts remaining in the Fund shall be returned to the District.

SECTION 11. STANDARD OF CARE

The Trustee shall perform such duties as are specifically set forth in the Agreement. The Trustee shall exercise its duties with the degree of care and skill that a prudent person would exercise in the conduct of his own affairs.

No provision of the Agreement, however, shall be construed to relieve Trustee from liability for its own neglect or willful misconduct except that:

A. In the absence of bad faith on the part of the Trustee, the Trustee may conclusively rely, as to truth, authenticity and correctness, upon all documents and writings, including but not limited to all investment instructions, Certifications, Special Certifications and General Withdrawals pursuant to Sections 5 and 6 of the Agreement, furnished to the Trustee by the District, or by any investment manager appointed under Section 7 of the

Agreement;

B. The Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith at the direction of the District or any investment manager respecting any Permitted Investments allowed by the Agreement; and

C. The Trustee shall have no responsibility to collect from the District any payments necessary to discharge any liabilities of the District established by the NRC.

SECTION 12. MAINTENANCE OF OFFICE

There shall at all times be a Trustee hereunder which shall be a national bank organized, chartered and doing business by virtue of the laws of the United States of America and authorized under such laws to exercise corporate trust powers, having combined capital and surplus and retained earnings of at least Fifty Million Dollars (\$50,000,000.00), and subject to supervision or examination by Federal authority. For purposes of determining whether such corporation meets the requirement of the preceding sentence, the combined capital and surplus and retained earnings of such corporation shall be deemed to be its combined capital and surplus and retained earnings as set forth in its most recent published report of condition. If at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section 12, the District shall have the authority to request the immediate resignation of the Trustee in the manner and with the effect specified in Section 13 below.

SECTION 13. RESIGNATION OR REMOVAL OF TRUSTEE

The Trustee may at any time resign by giving 90 days' prior written notice to the District and the NRC by certified mail of such resignation, provided that no such resignation shall take effect until a successor Trustee is appointed. If a successor Trustee has not: (1) been so appointed; and (2) accepted such appointment within ninety (90) days after the District has

received Trustee's notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor Trustee. Such court may thereupon, after receiving such petition, appoint a successor Trustee.

Upon written notification by the District to the NRC, the Trustee may be removed by the District, and a Successor Trustee appointed, upon the occurrence of any of the following:

A. The Trustee ceases to be eligible in accordance with the provisions of Section 12 above and fails to resign after request therefore by the District;

B. The Trustee shall become incapable of acting or shall be adjudged bankrupt or insolvent, or a receiver shall have been appointed of the Trustee, or of its property or affairs for the purpose of rehabilitation, conservation or liquidation; or

C. The District shall determine, in its sole discretion, that the Trustee should be removed.

Should the Trustee resign or be removed for any reason, an independent audit of the Fund, pursuant to the terms of Section 7 herein, shall be conducted prior to the appointment of any successor Trustee. Any resignation or removal of the Trustee and appointment of a successor Trustee pursuant to the provisions of this Section 13 shall become effective only upon acceptance of appointment by the successor Trustee as provided in Section 14 below.

SECTION 14. SUCCESSOR TRUSTEE

Any successor Trustee appointed as provided in Section 13 herein shall execute, acknowledge and deliver to the District, the NRC, and to its predecessor Trustee, an instrument accepting such appointment hereunder and thereupon the resignation or removal of the predecessor Trustee shall become effective and such successor Trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, duties and obligations hereunder, with like effect as if originally named as Trustee

herein. Notwithstanding anything in the foregoing sentence to the contrary, on the request of the District, or on the request of the successor Trustee, the Trustee ceasing to act hereunder shall execute and deliver all such instruments of transfer as may be necessary to transfer to such successor Trustee: (1) all assets of the Fund; and (2) all the rights and powers of the Trustee ceasing to act under the Agreement.

No successor Trustee shall accept appointment as provided in this Section 14 unless at the time of such acceptance such successor Trustee shall be eligible under the provisions of Section 12 of the Agreement.

SECTION 15. DEFAULT BY DISTRICT.

In the event of the District's failure, whether by default or inability, to exercise any of its rights or obligations under this Agreement, the NRC may assume any and all of such rights and/or obligations as the NRC may, in its sole discretion, deem necessary or appropriate. If, pursuant to the terms of this Section 15, the NRC assumes any rights and/or obligations of the District hereunder, the NRC shall provide the Trustee with written notification of any such assumption. Thereafter, the Trustee shall make payments from the Fund, as the NRC shall direct in writing, solely for: i) payment of the costs of the Decommissioning covered by this Agreement; and ii) payment of all other expenses incurred by the District, the NRC or any other party in the discharge of any obligations under this Agreement. In addition, the Trustee shall refund to the District any amounts as the NRC shall specify in writing, and upon such refund, such amounts shall no longer constitute part of the Fund.

In the event it becomes necessary for the NRC to undertake any rights or obligations of the District pursuant to this Section 15, the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith at the direction of the NRC.

SECTION 16. IRREVOCABLE TRUST.

The Fund herein established shall constitute an Irrevocable Trust as required by NRC regulations, as amended from time to time, for the purpose of providing sufficient available funds to accomplish Decommissioning. The District shall have no rights to the monies held in the Fund except as provided in the Agreement. Notwithstanding anything herein to the contrary, however, should NRC regulations be amended, the effect of which would be that the Fund is no longer required, the District may terminate the Agreement and revoke the Fund herein established and all assets of the Fund as of the date of any such termination shall be returned to the District.

SECTION 17. EFFECTIVE DATE

This Agreement shall commence and become operative on July 2, 1990 (the "Effective Date").

SECTION 18. SUCCESSORS AND ASSIGNS

All the covenants and representations made by the District and contained in the Agreement shall bind and inure to the benefit of its successors and assigns, whether so expressed or not.

SECTION 19. SEVERABILITY

If any provision of the Agreement should be determined by a court of competent jurisdiction to be contrary to law, such provision shall be deemed and construed to be severable from the remaining provisions herein contained, and shall in no way affect the validity of the remaining provisions of the Agreement.

SECTION 20. ENTIRE AGREEMENT

The Agreement supersedes all prior negotiations, agreements and understandings among the parties with respect to the subject matter hereof. To be effective, any amendment to, or modification of, the Agreement must be in writing, executed by the District and the Trustee, and approved by the NRC.

SECTION 21. NOTICES

Unless otherwise specified herein, all notices required to be given by or to either party pursuant to the terms of the Agreement, including but not limited to, all Certifications, Special Certifications, General Withdrawals, invoices, reports, requests and communications, shall be sufficiently given only if in writing and if sent by first class United States mail, postage prepaid, by or to the appropriate addressee indicated below:

To the Trustee:

First National Bank of Omaha
One First National Center
Omaha, NE 68102
Attn: Marc M Diehl, Trust Officer-Manager
Corporate Trust Division

To the NRC:

U. S. Nuclear Regulatory Commission
OWSN 12E4
Washington, DC 20555
Attn: Robert S. Wood

To the District:

The Division Manager - Finance
Omaha Public Power District
444 South 16th Street Mall
Omaha, NE 68102

With a Copy To:

Stephen G. Olson, Esq.
500 Energy Plaza
Omaha, NE 68102

Changes to the above addresses may be made from time to time by either of the above-listed entities, by notice to the other entity from the above-named representative of the respective entity or from any other duly authorized officer of that entity as certified by the Secretary of that entity.

SECTION 22. HEADLINES

The headings of the Sections used in the Agreement are for convenience only and shall not control or affect the meaning of any of the provisions thereof.

SECTION 23. REPRESENTATIONS

A. The Trustee represents that it has the power, authority and legal right to enter into and perform its obligations set forth in the Agreement and that the execution, delivery and performance hereof have been duly authorized and will not violate any applicable law, regulation or by-law of the Trustee.

B. The District represents that it has the power, authority and legal right to enter into and perform its obligations set forth in the Agreement, and that the Agreement and the Fund herein established have been duly approved by the NRC as being in conformity with its requirements set forth in 10 C.F.R. §50.75, as amended from time to time. The District further represents that the execution, delivery and performance of the Agreement have been duly authorized and will not violate any applicable law, regulation or by-law of the District.

SECTION 24. COUNTERPARTS

The Agreement may be executed in several counterparts, all or any of which shall be regarded for all purposes as an original and shall constitute and be one and the same Agreement.

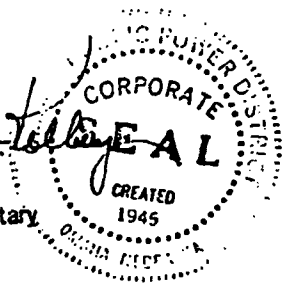
SECTION 25. GOVERNING LAW

The Agreement and any questions concerning its validity, construction or performance shall be governed by the laws of the State of Nebraska.

IN WITNESS WHEREOF, the parties hereto have each caused the Agreement to be executed by their duly authorized officers and their corporate seals to be hereunto affixed and attested as of the date first above written, but actually on June 27, 19 90.

ATTEST:

James J. Holby
Assistant Secretary



OMAHA PUBLIC POWER DISTRICT

By: *E. C. [Signature]*
Its: Executive Vice President

ATTEST:

FIRST NATIONAL BANK OF OMAHA,
Trustee

By:
Its:

Wm M. Hill
Trust Officer

ATTEST:

Alan E. Schulz
Trust Officer

sgc/nmh

EXHIBIT "1"

THE FIRST ANNUAL PAYMENT

1. Cash:		\$ _____
2. Securities:		
	<u>Description of Security</u>	<u>Amortized Book Cost</u>
a.		\$ _____
b.		\$ _____
c.		\$ _____
d.		\$ _____
e.		\$ _____
f.		\$ _____
g.		\$ _____
etc.		
	Subtotal	\$ _____
	FIRST ANNUAL PAYMENT	\$ _____

EXHIBIT "2"

Check One:

Certification

Special Certification

CERTIFICATION

[Insert name and address of Trustee]

Attention: Trust Department

In accordance with the terms of that certain Trust Agreement dated _____, I, _____, [insert title officer] of Omaha Public Power District (the "District") hereby request a withdrawal from the Omaha Public Power District Fort Calhoun Decommissioning External Trust Fund (the "Fund") as follows:

- 1. Total Decommissioning Expenditures incurred during the prior 3 month period: \$ _____

minus

Aggregate amount of all withdrawals for Decommissioning during the prior 3 month period: \$ _____

equals

Prior Unfunded Expenditures: \$ _____

PLUS

- 2. Anticipated Decommissioning Expenditures for the period _____, 19____ to _____, 19____: \$ _____

EQUALS

CERTIFICATION AMOUNT \$ _____

The Certification Amount shall be paid to the District via wire transfer to the District's account number _____ at _____ [insert name of Depository Bank] _____ on or before _____, 19____.

The undersigned hereby certifies that the Certification Amount requested from the Fund shall be used solely for the

purpose of meeting the District's expenses in connection with the Decommissioning of the District's Fort Calhoun Nuclear Power Generating Station Unit Number 1. The undersigned further certifies that a copy of this Certification has been submitted to the Nuclear Regulatory Commission.

DATED _____.

OMAHA PUBLIC POWER DISTRICT

By _____
Its _____

LIC-11-0050
Enclosure 5
Page 1

1992 Supplemental Plan Trust Agreement

**OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION DECOMMISSIONING TRUST - 1992 SUPPLEMENTAL PLAN
TRUST AGREEMENT**

This Trust Agreement, (the "Agreement") dated as of July 1, 1993 has been entered into by and between Omaha Public Power District, a public corporation and political subdivision of the State of Nebraska (the "District") and the First National Bank of Omaha as trustee (the "Trustee").

WHEREAS, the District presently owns and operates the Fort Calhoun Nuclear Power Generating Station Unit No. 1 (the "Station") under Operating License Number DPR-40 (the "License") issued by the Nuclear Regulatory Commission (the "NRC"); and

WHEREAS, Resolution Number 3945 adopted by the Board of Directors of the District on June 7, 1990, established the 1990 Decommissioning Plan in compliance with NRC regulations 10 C.F.R. Part 50, as amended from time to time; and

WHEREAS, to ensure that additional funds are available to pay the direct and indirect costs of decommissioning the Station (the "Decommissioning") Resolution Number 4220 was adopted by the Board of Directors of the District on October 15, 1992, (the "Resolution") providing for the 1992 Supplemental Plan which creates a Supplemental External Trust Fund (hereinafter defined) by depositing funds in an account segregated from the District's assets; and

WHEREAS, the Resolution permits the District to establish such Supplemental External Trust Fund with the Trustee upon the terms and conditions hereinafter set forth in this agreement; and

NOW THEREFORE, in consideration of the foregoing and the mutual covenants hereinafter set forth, the parties hereto agree as follows:

1. **Establishment of Trust Fund.** There is hereby established for the benefit of the District and for the purpose of accumulating funds for the Decommissioning, a segregated Supplemental External Trust Fund designated the "Omaha Public Power District Fort Calhoun Station Supplemental External Trust Fund - 1992 Supplemental Plan" (the "1992 Supplemental Fund") to be held in the custody of the Trustee. All funds deposited pursuant to Section 3 of this Agreement (the "Principal") and all income earned on the Principal and any income earned on the reinvestment of such income (the "Earnings") shall be held by the Trustee, in trust, pursuant to the terms and conditions hereof. The 1992 Supplemental Fund shall be held by the Trustee, not individually, but solely as trustee. The 1992 Supplemental Fund shall be segregated from any other funds held or owned by the Trustee and held in such a manner so as not to be subject to the claims of any creditors of the Trustee.

2. **Grantor Trust.** The parties hereby acknowledge that the District is an entity exempt from taxation under Section 501(c) of the Internal Revenue Code of 1986, as amended. The parties agree that the 1992 Supplemental Fund herein established is a Grantor Trust pursuant to Section 671 *et. seq.* of the Internal Revenue Code of 1986, as amended; that the District is the owner of the entire 1992 Supplemental Fund for federal income tax purposes; and that the Trustee shall not be required to file a federal income tax return with respect to the 1992 Supplemental Fund for any taxable year during which the 1992 Supplemental Fund is in existence.

3. **Deposits.** All deposits (other than deposits of Earnings) to the 1992 Supplemental Fund shall be made in an amount and frequency of which shall be determined by the District at its sole discretion.

4. **Investments.** The Trustee hereby establishes the 1992 Supplemental Fund and accepts any cash and securities deposited therein pursuant to the Agreement. The Trustee has the duty to execute the investment of

any and all monies held hereunder in the following investments permitted of Public Power Districts in the State of Nebraska:

- A. Any obligations of the United States Government having the backing of the full faith and credit of the United States of America; and/or
- B. Any and all investments permitted to be made by Public Power Districts under the laws of the State of Nebraska, as amended from time to time.
- C. Repurchase Agreements collateralized by securities listed in Section 4(A) or (B) (collectively the "Permitted Investments").

The Trustee shall exercise its investment duties pursuant to this Section 4 only in accordance with the oral instructions (followed by prompt written confirmation thereof) of the District. The District hereby retains sole authority to determine which among the Permitted Investments the Trustee shall make, and the District hereby agrees to be bound by the terms and conditions of the Agreement when making such investment determinations. Notwithstanding any of the foregoing to the contrary, the District may, in its sole discretion, and at any time during the term of the Agreement, delegate its power to direct the investment of the 1992 Supplemental Fund's assets to an investment manager. Any such investment manager to whom the District may delegate its investment powers granted herein, shall be required to execute and deliver to the Trustee any and all documents as may be necessary to evidence said investment manager's agreement to be bound by all terms and conditions respecting the Permitted Investments contained in this Section 4 of the Agreement. In the event the Trustee follows all such directions received from the District or such investment manager appointed by the District, the Trustee shall not be liable for any losses incurred by reason of any action taken pursuant to such directions provided such directions are in compliance with the requirements of this Section 4.

5. **Withdrawals.** The District is hereby empowered to make withdrawals from the 1992 Supplemental Fund as solely determined by the District. Withdrawal requests will occur in writing executed by a Treasury Officer as appointed by the District's Board of Directors. Such withdrawal requests will contain detailed instructions directing the movement of the withdrawn cash or securities.

6. **Account Maintenance.** The Trustee shall maintain records of deposits, disbursements, expenses, income and loss with respect to Principal and Earnings and from time to time upon the request of the District, and no less than quarterly, shall provide an account with respect thereto to the District. The District retains the right to cause an audit of the 1992 Supplemental Fund and all transactions relating thereto to be conducted by its own or independent accountants; and all costs of said audit to be borne by the District.

7. **Compensation of Trustee.** The District shall compensate the Trustee for its performance of the services specified in the Agreement. During the initial two (2) years of the Agreement, the Trustee shall be entitled to quarterly compensation in the amount of \$1,360.00 per quarter for the first year and \$1,600.00 per quarter for the second year. On a quarterly retrospective basis, the Trustee shall submit to the District an invoice for the Trustee's quarterly compensation as set forth in this Section 7 including all fair and reasonable administrative expenses incurred by the Trustee in connection with the administration of the 1992 Supplemental Fund.

The District shall pay such quarterly invoices no later than thirty (30) days following the end of the applicable calendar quarter or ten (10) days following the receipt by the District of such quarterly invoices, whichever occurs later.

For all successive years that the Agreement shall be in effect, the Trustee shall receive compensation for its services hereunder in such amounts and upon such terms as shall be agreed upon by the parties hereto in writing. In the event that the parties are unable to agree upon the Trustee's compensation for any such successive year, the Trustee shall continue to receive the quarterly compensation stated in the preceding paragraph of this Section 7 for each such successive year.

8. Termination. This Agreement shall terminate on such date as the Decommissioning shall be completed (the "Termination Date") or on such other date as determined by the District. On the Termination Date, the Trust herein established shall terminate, and any amounts remaining in the 1992 Supplemental Fund shall be returned to the District.

9. Standard of Care. The Trustee's duties hereunder shall be limited to hold the 1992 Supplemental Fund and to make investments thereof and distributions therefrom in accordance with the terms of this Agreement. The Trustee shall exercise its duties with the degree of care and skill that a prudent person would exercise in the conduct of his own affairs.

No provision of the Agreement, however, shall be construed to relieve the Trustee from liability for its own neglect or willful misconduct except that:

A. In the absence of bad faith on the part of the Trustee, the Trustee may conclusively rely, as to truth, authenticity and correctness, upon all documents and writings, including but not limited to all investment instructions and withdrawals pursuant to Sections 4 and 5 of the Agreement, furnished to the Trustee by the District, or by any investment manager appointed under Section 4 of the Agreement; and

B. The Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith at the direction of the District or any investment manager respecting any Permitted Investments allowed by the Agreement.

10. Resignation, Removal and Appointment.

A. The Trustee and any successor Trustee shall be a bank or trust company organized and doing business under the laws of the United States or any of the several states of the United States, having a combined capital and surplus of at least Fifty Million Dollars (\$50,000,000), and subject to supervision by federal authority. In the event that the Trustee at any time shall cease to meet the requirements of this Section 10(A), the Trustee shall immediately inform the District and if so requested by the District resign in the manner provided in Section 10(B) below.

B. The Trustee may resign by giving not less than 90 days prior notice to the District; provided, however that no such resignation shall become effective until a successor trustee is appointed and accepts such appointment.

C. The Trustee may be removed at any time by the District upon notice of termination delivered to the Trustee by the District 30 days prior to such removal.

D. If at any time the Trustee shall resign, be removed or the position of the Trustee shall become vacant for any reason, the District shall promptly appoint a successor to the Trustee. Upon any such appointment such successor shall execute, acknowledge and deliver to its predecessor and the District, an instrument accepting such appointment hereunder, and thereupon such successor, without any further act, shall be vested with all rights, immunities and powers and shall be subject to all duties and obligations of its predecessor; provided, however, that no successor trustee shall be liable for

any act or omission of any predecessor trustee. In the event that a successor has not been appointed within ninety (90) days of the date of notice of such resignation, resignation, removal or vacancy, the Trustee may petition any court of competent jurisdiction for the appointment of a successor. Such court may thereupon, appoint a successor Trustee to serve until a successor shall be appointed by the District as provided above.

11. **Successors and Assigns.** All the covenants and representations made by the District and contained in the Agreement shall bind and inure to the benefit of its successors and assigns, whether so expressed or not.

12. **Severability.** If any provision of the Agreement should be determined by a court of competent jurisdiction to be contrary to law, such provision shall be deemed and construed to be severable from the remaining provisions herein contained, and shall in no way affect the validity of the remaining provisions of the Agreement.

13. **Entire Agreement.** The Agreement supersedes all prior negotiations, agreements and understandings among the parties with respect to the subject matter hereof with the exception of the Trust Agreement known as the *Fort Calhoun Station Unit No. 1 Decommissioning Funding Plan (the "1990 Plan")*. To be effective, any amendment to, or modification of, the Agreement must be in writing, executed by the District and the Trustee.

14. **Notices.** Unless otherwise specified herein, all notices required to be given by or to either party pursuant to the terms of the Agreement, including but not limited to, all withdrawals, invoices, reports, requests, and communications, shall be sufficiently given only if in writing and if sent by first class United States mail, postage prepaid, by or to the appropriate addressee indicated below:

To the Trustee:

Corporate Trust Coordinator
First National Bank of Omaha
One First National Center
Omaha, Nebraska 68102-1596

To the District:

Division Manager - Finance
Omaha Public Power District
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Changes to the above addresses may be made from time to time by either of the above-listed entities by notice to the other entity from the above-named representative of the respective entity or from any other duly authorized officer of that entity as certified by the Secretary of that entity.

15. **Section Headings.** The headings of the Sections used in the Agreement are for convenience only and shall not control or affect the meaning of any of the provisions thereof.

16. **Representations.** Each Party represents that it has the power, authority and legal right to enter into and perform its respective obligations set forth in the Agreement and that the execution, delivery and performance hereof have been duly authorized and will not violate any applicable judgement, order, law or regulation or any rules or by-laws of each party.

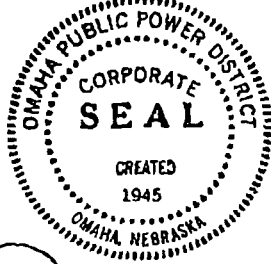
17. Counterparts. The Agreement may be executed in several counterparts, all or any of which shall be regarded for all purposes as an original and shall constitute and be one and the same Agreement.

18. Governing Law. The Agreement and any questions concerning its validity, construction or performance shall be governed by the laws of the State of Nebraska.

IN WITNESS WHEREOF, each of the parties has caused this Agreement to be executed by its duly authorized representative on the date set forth beneath its signature below, and the signature below on behalf of the Trustee is intended as evidence of the Trustee's acceptance of the trusts created hereunder. This Agreement shall be effective upon execution by all parties hereto.

ATTEST:

Caree Kelley
Assistant Secretary



OMAHA PUBLIC POWER DISTRICT
a public corporation and
political subdivision of the
state of Nebraska

E. C. Pape
By: E. C. Pape

Title: Executive Vice President

Date: 5/6/93

ATTEST:

Marion Hill
Trust Officer

FIRST NATIONAL BANK OF OMAHA, Trustee

John E. Kenihan
By: John E. Kenihan

Title: Corporate Trust Coordinator

Date: 5/13/93

Board Resolutions Approving Trust Agreements¹

¹ Resolution No. 3945: Decommissioning Fund Trust Agreement
Resolution No. 4220: 1992 Supplemental Plan Trust Agreement

OMAHA PUBLIC POWER DISTRICT

CERTIFIED COPY OF
RESOLUTION NO. 3945

WHEREAS, the Omaha Public Power District (the "District") owns and operates the Fort Calhoun Nuclear Power Generating Station Unit No. 1 (the "Station") under Operating License No. DPR-40 (the "License") issued by the Nuclear Regulatory Commission (the "NRC"), and

WHEREAS, the License is expected to expire on June 7, 2008, at which time the District desires to remove the Station safely from service and reduce residual radioactivity to a level that permits release of the Station for unrestricted use and termination of the License (the "Decommissioning"), and

WHEREAS, in February, 1983, the District adopted a plan establishing an internal fund for the accumulation of monies for Decommissioning purposes (the "1983 Plan"), and

WHEREAS, in June, 1988, the NRC issued new regulations to 10 C.F.R. Part 50 to ensure that sufficient funds will be available to pay the costs of Decommissioning, and

WHEREAS, pursuant to said new NRC regulations, the District was required to submit to the NRC, by July 27, 1990, a plan for funding the Decommissioning of the Station, which plan must require that funds for Decommissioning purposes are segregated from the District's assets (the "1990 Plan"), and

WHEREAS, on October 27, 1989, the District submitted the 1990 Plan to the NRC, and in accordance with NRC regulations, said 1990 Plan calls for the establishment of an external trust fund (the "Fund") to be held in the custody of a trustee (the "Trustee") pursuant to the terms of the "Trust Agreement" attached to, and made a part of, the 1990 Plan, and

WHEREAS, the 1990 Plan was accepted by the NRC on February 1, 1990, and

WHEREAS, the 1990 Plan provides that the Balance Amount held in the internal fund established pursuant to the 1983 Plan be transferred to the Fund upon establishment of same, and

WHEREAS, the District has obtained proposals from five national banks to act as Trustee of the Fund, and

WHEREAS, the First National Bank of Omaha has submitted the most competitive of the aforementioned proposals and is otherwise qualified to act as Trustee of the Fund.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Omaha Public Power District as follows:

1. That the District's 1990 Plan for funding the Decommissioning of the Fort Calhoun Nuclear Power Generating Station Unit No. 1, and the Trust Agreement establishing the Fund, are hereby approved and adopted.

2. That the First National Bank of Omaha is hereby authorized to act as Trustee of the Fund pursuant to the Trust Agreement.

3. That the President or Vice President, Treasurer or Assistant Treasurer, Secretary or Assistant Secretary are hereby authorized and directed to take such actions and to execute such documents as shall be necessary and proper to implement the 1990 Plan and the Trust Agreement.

I hereby certify that the above is a true and correct copy of Resolution No. 3945 adopted by the Board of Directors of Omaha Public Power District at a meeting held on June 7, 1990.


Assistant Secretary



OMAHA PUBLIC POWER DISTRICT

**CERTIFIED COPY OF
RESOLUTION NO. 4220**

WHEREAS, the Omaha Public Power District has previously adopted a Decommissioning Funding Plan and established the Decommissioning Trust to fund the estimated cost of decommissioning Fort Calhoun Station - Unit No. 1 when its operating license expires in 2008, and

WHEREAS, the current Decommissioning Funding Plan uses the funding requirement of \$116.5 million (1992 dollars) as provided by the Nuclear Regulatory Commission regulations, and

WHEREAS, the studies recently completed by TLG Engineering produced estimates to decommission the Radiated and Non-radiated Plant at the Fort Calhoun Station, and to provide a Fuel Storage Facility, and

WHEREAS, the new estimates for decommissioning the Fort Calhoun Station compare favorably to estimates of these costs for similar nuclear generating stations, and

WHEREAS, it would be advisable for the District to adopt and fund a decommissioning estimate based on the recently completed TLG Engineering studies for the Radiated Plant, including contingency, and the Fuel Storage Facility in the total estimated amount of \$312.0 million in 1992 dollars starting in January 1993, and

WHEREAS, funding of the TLG Engineering estimates will require additional contributions to the decommissioning fund of approximately \$7.0 million in 1993.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Omaha Public Power District:

1. That the decommissioning estimates of TLG Engineering dated September 1992 for the Fort Calhoun Station covering the Radiated Plant plus contingency and the Fuel Storage Facility are adopted and funding of these new estimates shall commence effective January 1, 1993.

2. That Management is hereby authorized and directed to establish the appropriate funding mechanisms to accommodate the increased funding.

I hereby certify that the foregoing is a true and correct copy of Resolution No. 4220, adopted by the Board of Directors of the Omaha Public Power District at a meeting held October 15, 1992.




Assistant Secretary

OPPD 2011 Corporate Operating Plan O&M Expense Information

2011 CORPORATE OPERATING PLAN OPERATION AND MAINTENANCE EXPENSE

The District's 2011 total budgeted operation and maintenance (O&M) expense is \$758.1 million, which is \$39.1 million or 5.4% more than the 2010 projected amount.

Fuel expense is the largest category of O&M expense, representing 35.3% of total O&M expense. Fuel expense is budgeted at \$267.3 million for 2011, an increase of \$14.3 million or 5.6% more than the 2010 projected amount.

Production expense represents 29.8% of the total and is budgeted to be \$226.0 million in 2011, which is \$7.2 million or 3.3% more than the 2010 projected amount.

Purchased power, including wind purchases, represents 5.0% of total O&M expense and is budgeted at \$37.6 million for 2011. This represents a decrease of \$2.0 million or 5.0% below the 2010 projected amount. This decrease includes the reduction for the prepayment for 2011 wind energy purchases in 2010.

Transmission and distribution expense represents 7.9% of total O&M expense and is budgeted at \$59.6 million, which is \$5.7 million or 10.5% more than the 2010 projected amount. This increase includes the cost of energy transmission through the Southwest Power Pool (SPP) of \$7.1 million.

Customer accounting and services expense represents 4.9% of total O&M expense and is budgeted at \$37.1 million for 2011. This represents an increase of \$7.8 million or 26.4% more than the 2010 projected amount.

Administrative and general expense represents 17.1% of total O&M expense and is budgeted at \$130.5 million for 2011. This category reflects an increase of \$6.2 million or 5.0% greater than the 2010 projected amount.

The nuclear decommissioning fund does not require any additional funding in 2011; decommissioning cost estimate escalation is derived using IHS Global Insight - Consumer Price Index – All Urban Customers and decommissioning fund return is escalated using IHS Global Insight interest rates on Three to Five Year Government Bonds.

Board Resolution Approving the Corporate Operating Plan



Omaha Public Power District

Thompson/Easterlin

RESOLUTION NO. 5845

WHEREAS, the Board of Directors has reviewed the Omaha Public Power District's 2011 Corporate Operating and Capital Expenditure Plan ("Plan"), and

WHEREAS, the Plan does not include a general rate adjustment, and

WHEREAS, the Plan includes the use of regulatory accounting, with Board approval, to expense a \$4.2 million prepayment for 2011 wind energy in 2010 to reduce the Fuel and Purchased Power Adjustment (FPPA) from 2.6% to 2.0%, or a 2011 FPPA rate of \$0.00149 per kWh, and

WHEREAS, the District's consulting engineer, R. W. Beck, Inc., has reviewed the 2011 Corporate Operating and Capital Expenditure Plan, as requested by the Board of Directors, and recommends it for approval by the Board of Directors.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Omaha Public Power District hereby approves the 2011 Corporate Operating and Capital Expenditure Plan.

Adopted December 16, 2010

2010 Global Insight Forecast Rates

GLOBAL INSIGHT FORECAST RATES
AS OF 03/10

	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
GROSS NATIONAL PRODUCT (\$)	13436	13812	14310	14751	15105	15457	15819	16199	16619	17076
GROSS NATIONAL PRODUCT (GRTH RT)	2.70	2.80	3.61	3.08	2.40	2.33	2.34	2.40	2.59	2.75
C.P.I. (ALL URBAN) GROWTH RATE	2.2	2.1	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.8
C.P.I. (WAGE EARN.) GROWTH RATE	0.90	2.76	1.96	1.97	2.06	2.27	2.06	1.81	1.86	1.55
PRIME RATE ON S.T. BUSINESS LOANS	3.33	4.70	6.34	6.55	7.59	7.75	7.75	7.75	7.75	7.75
MONEY RATE ON COMMERCIAL PAPER 3-MTH	0.56	2.35	3.83	4.08	5.03	5.07	5.07	5.07	5.07	5.07
YIELD ON DOMESTIC MUNICIPAL BONDS-BND BUYER	4.47	4.71	5.22	5.24	5.82	5.85	5.85	5.85	5.85	5.85
DISCOUNT RATE - FEDERAL RES. OF N.Y.	0.58	2.07	4.22	4.55	5.59	5.75	5.75	5.75	5.75	5.75
AVE MKT YLD ON U.S. GOVT 6-MTH BILLS	0.56	2.25	3.49	3.72	4.66	4.70	4.70	4.70	4.70	4.70
AVE MKT YLD ON U.S. GOVT 10-YR BONDS	3.80	4.03	4.54	4.72	5.54	5.57	5.57	5.57	5.57	5.57
HOUSING STARTS (MILLIONS)	0.75	1.27	1.61	1.73	1.73	1.76	1.78	1.78	1.79	1.82
EFFECTIVE RATE ON FEDERAL FUNDS	0.24	1.70	3.34	3.55	4.59	4.75	4.75	4.75	4.75	4.75
WHOLESALE PRICE - COAL (GROWTH RATE)	-6.26	-0.23	0.29	1.90	1.47	1.39	1.43	1.41	1.44	1.42
WHOLESALE PRICE - GAS FUELS (GROWTH RATE)	-22.02	42.94	-1.74	-2.46	11.94	13.08	2.47	-2.01	2.72	5.18
WHOLESALE PRICE - ELECTRICITY (GROWTH RATE)	-0.22	2.93	3.17	2.08	2.04	2.35	2.00	1.87	1.78	1.85
WHOLESALE PRICE - CRUDE PET. (GROWTH RATE)	-7.74	9.57	4.95	4.27	3.84	4.64	3.42	1.86	0.75	-1.37
WHOLESALE PRICE - REFINED PET. (GROWTH RATE)	-0.38	7.92	4.24	3.65	3.44	3.91	3.01	1.77	0.80	-0.97
THREE-MONTH T-BILLS	0.43	2.08	3.39	3.62	4.56	4.60	4.60	4.60	4.60	4.60
ONE-YEAR T-BILLS	0.74	2.41	3.65	3.88	4.82	4.86	4.86	4.86	4.86	4.86
THREE - FIVE YEAR GOVT BONDS	2.61	3.44	4.24	4.42	5.26	5.29	5.29	5.29	5.29	5.29
OUTPUT/HOUR (NON-FARM BUSINESS SECT.)	1.52	1.53	1.54	1.55	1.57	1.60	1.63	1.66	1.70	1.74

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
GROSS NATIONAL PRODUCT (\$)	17559	18028	18482	18930	19391	19888	20376	20860	21343	21831
GROSS NATIONAL PRODUCT (GRTH RT)	2.83	2.67	2.52	2.42	2.43	2.57	2.45	2.37	2.32	2.29
C.P.I. (ALL URBAN) GROWTH RATE	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	1.9
C.P.I. (WAGE EARN.) GROWTH RATE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRIME RATE ON S.T. BUSINESS LOANS	7.75	7.75	7.75	7.75	7.75	7.75	7.75	7.75	7.75	7.75
MONEY RATE ON COMMERCIAL PAPER 3-MTH	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07
YIELD ON DOMESTIC MUNICIPAL BONDS-BND BUYER	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85
DISCOUNT RATE - FEDERAL RES. OF N.Y.	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75
AVE MKT YLD ON U.S. GOVT 6-MTH BILLS	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70
AVE MKT YLD ON U.S. GOVT 10-YR BONDS	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57
HOUSING STARTS (MILLIONS)	1.82	1.79	1.77	1.75	1.73	1.73	1.72	1.69	1.64	1.61
EFFECTIVE RATE ON FEDERAL FUNDS	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75
WHOLESALE PRICE - COAL (GROWTH RATE)	1.40	1.43	1.36	1.34	1.42	1.60	1.19	1.63	1.79	1.80
WHOLESALE PRICE - GAS FUELS (GROWTH RATE)	1.12	2.59	1.31	1.39	2.84	2.36	3.88	3.12	3.08	1.59
WHOLESALE PRICE - ELECTRICITY (GROWTH RATE)	1.90	1.38	1.36	1.56	1.45	1.64	1.78	1.62	1.88	1.84
WHOLESALE PRICE - CRUDE PET. (GROWTH RATE)	-4.84	-4.93	-4.23	-3.77	-0.90	-1.63	-1.75	-1.64	-0.91	-0.96
WHOLESALE PRICE - REFINED PET. (GROWTH RATE)	-1.53	-0.48	-0.19	0.45	2.22	1.85	1.88	2.23	2.63	2.49
THREE-MONTH T-BILLS	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
ONE-YEAR T-BILLS	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86
THREE - FIVE YEAR GOVT BONDS	5.29	5.29	5.29	5.29	5.29	5.29	5.29	5.29	5.29	5.29
OUTPUT/HOUR (NON-FARM BUSINESS SECT.)	1.78	1.82	1.87	1.91	1.95	2.00	2.04	2.08	2.12	2.17