ODEC Old Dominion Electric Cooperative℠

December 15, 2015

ATTN: Document Control Desk
Director, Division of Spent Fuel Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

License No. SNM-2507, 2501
Docket No. 72-16, 72-56

OLD DOMINION ELECTRIC COOPERATIVE
NORTH ANNA POWER STATION INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS (ISFSIs)
10 CFR 72.30 DECOMMISSIONING FUNDING PLAN

Pursuant to 10 CFR 72.30(b) and (c), Old Dominion Electric Cooperative submits the attached decommissioning funding plan for the North Anna Power Station ISFSIs.

Please contact Ms. Karen Huddle at (804) 968-7151 if you have any questions or require additional information.

Sincerely,

Todd T. Brickhouse
Vice President and Treasurer
Old Dominion Electric Cooperative

Attachment

Commitments made by this letter: None

cc: Mr. J. N. Nguyen, Senior Project Manager
U. S. Nuclear Regulatory Commission, Mail Stop 14 A44
Three White Flint North
11601 Landsdown Street
Rockville, MD 20852

NMSS26

4201 Dominion Boulevard
Glen Allen, Virginia 23060
804-747-0592
804-747-3742
www.odec.com

David A. Heacock, President and Chief Nuclear Officer
Virginia Electric and Power Company
120 Tredegar Street
Richmond, Virginia 23219

Frederick D. Gerloff, Decommissioning Consultant
Generation Finance
Dominion Resources Inc.
120 Tredegar Street
Richmond, Virginia 23219

Attachment 1

Decommissioning Funding Plan for North Anna Power Station ISFSIs
Specific License No. SNM-2507, 2501, Docket No. 72-16
General License under 10 CFR 72.210, Docket No. 72-56

Pursuant to 10 CFR 72.30(b), Old Dominion Electric Cooperative (ODEC) submitted a decommissioning funding plan for the North Anna Power Station (NAPS) Independent Spent Fuel Storage Installations (ISFSIs) on December 13, 2012 (Serial No. 12-736, ADAMS Accession No. ML12353A032). ODEC responded to an NRC Request for Additional Information related to this submittal on October 21, 2013 (ADAMS Accession No. ML13296A023).

10 CFR 72.30(c) requires each holder of a license under Part 72 to resubmit the decommissioning funding plan at the time of license renewal and at intervals not to exceed three (3) years with adjustments as necessary to account for changes in costs and the extent of contamination. In accordance with 10 CFR 72.30 (c), the information below provides ODEC's periodic update to the NAPS ISFSI decommissioning funding plan.

Pursuant to 10 CFR 72.30(b), a decommissioning funding plan must contain:

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

   ODEC provides financial assurance for the decommissioning of NAPS using the external sinking fund method. Its collections are based on site-specific cost estimates that include radiological decommissioning, spent fuel management (including ISFSI decommissioning) and site restoration.

   Table 1 below shows the Total Funds and Allocated Radiological Funds accumulated as of December 31, 2014 and in future dollars for NAPS Units 1 and 2. The table shows that the funds available for ISFSI Decommissioning, Spent Fuel Management and Site Restoration exceed the ISFSI Decommissioning Cost Estimate (DCE) amount.

Table 1

Unit End of License Year	Total Funds in External Trusts (12/31/14 $)	Total Funds in External Trusts (Future $)[1]	Allocated Radiological Funds in External Trusts (12/31/14 $)	Allocated Radiological Funds in External Trusts (Future $)[2]	NRC Minimum (Future $)[3]	Funds Available ISFSIs Decom, Spent Fuel Mgt & Site Restoration (12/31/14 $)[4]	ISFSIs DCE (12/31/14 $)[5]
North Anna Unit 1 2038	$71.99 million	$114.09 million	$49.67 million	$78.71 million	$53.33 million	$22.32 million	$168,000
North Anna Unit 2 2040	$73.95 million	$122.87 million	$51.02 million	$84.77 million	$53.33 million	$22.93 million	

1) Total Funds in External Trust (Future $) = 2% Real Rate of Return applied to growth of funds in the External Trust at Start of Decommissioning for each unit, as reported in ODEC's March 30, 2015 biennial filing (ADAMS Accession No. ML15099A396).

2) Allocated Radiological Funds in External Trust (Future $) = 2% Real Rate of Return applied to growth of funds in the External Trust at Start of Decommissioning for each unit as reported in the March 30, 2015 biennial filing.

3) NRC Minimum (Future $) = NRC Minimum amount reflects December 31, 2014 NRC Minimum Amount due to the application of a 2% Real Rate of Return to growth of funds in the External Trust and keeping the NRC Minimum amount constant as reported in the March 30, 2015 biennial filing. The NAPS NRC Minimum Amounts are presented representing ODEC's 10.74% share of responsibility for NAPS decommissioning costs[1].

4) Funds Available for ISFSI Decommissioning, Spent Fuel Management and Site Restoration (2014 $) is calculated as the difference between Total Funds in the External Trusts (2014 $) and the Allocated Radiological Funds in External Trusts (2014 $).

5) ISFSI DCE amount as reported in Table 2 of this filing.

As a regulated electric utility, ODEC has the ability to recover its cost of service, including decommissioning funding, through rates. ODEC obtains a site specific DCE for NAPS from Dominion Resources, Inc., which is updated approximately every five years, to determine whether there is any need to adjust wholesale power rates and contributions to the external sinking fund. The decommissioning cost is a fixed number in ODEC's formulary rate that requires Federal Energy Regulatory Commission approval prior to any adjustment.

[1] North Anna Power Station is jointly owned by Virginia Electric and Power Company (88.4%) and Old Dominion Electric Cooperative (11.6%). However, ODEC is responsible for 10.74% of the decommissioning obligation.

2) A detailed cost estimate for decommissioning, in an amount reflecting:

i. The cost of an independent contractor to perform all decommissioning activities;

ii. An adequate contingency factor; and

iii. The cost of meeting the §20.1402 of this chapter criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of §20.1403 of this chapter, the cost estimate may be based on meeting the §20.1403 criteria.

General Methodology Used to Develop ISFSI Decommissioning Cost Estimates

A site-specific ISFSI DCE based on 10 CFR 72.30 requirements was prepared for the NAPS ISFSI in 2014. The ISFSI DCE was based on the assumption that a third party contractor would perform decommissioning. To determine the cost of using a third party contractor, fully burdened labor rates (labor costs plus employee benefits and taxes) were used as a basis and a premium was added to represent a third party contractor's profit margin.

The site-specific ISFSI DCE includes undistributed costs (for support activities and costs such as staff, security, insurance, energy, materials and services) allocated to the ISFSI decommissioning period. The site specific ISFSI DCE includes a 25% contingency in accordance with NUREG-1757, Volume 3, Revision 1. Table 2 below shows the contingency as one line item.

The site-specific ISFSI DCE is based on remediating the site to a residual radioactivity level consistent with 10 CFR 20.1402 (i.e., unrestricted use). As shown in Table 2 below, the estimated cost to ODEC to decommission the ISFSIs at NAPS is $168,000 in 2014 dollars (10.74% decommissioning responsibility). Applying a CPI[2] based annual escalation rate to the 2014 dollars shown in Table 2, the total cost to decommission the NAPS ISFSIs is $169,600 in 2015 dollars.

Table 2

North Anna Power Station
Site Specific Cost Estimates Applicable to ISFSI Decommissioning Costs – 10 CFR 72.30
(in thousands of dollars)

ISFSI Decommissioning Activity Description	Labor	Equipment	Disposal	Other	25% Contingency	Total 2014 $	Total 2015 $
Distributed (Direct) Cost							
Preparation and NRC Review of License Termination Plan	$ 10.5	$ -	$ -	$ 16.5	$ -	$ 27.1	$ 27.3
Verification Survey of Horizontal Storage Modules	$ 14.1	$ 6.7	$ -	$ -	$ -	$ 20.8	$ 21.1
Preparation of Final Report on Decommissioning and NRC Review	$ 10.5	$ -	$ -	$ 16.5	$ -	$ 27.1	$ 27.3
Total Distributed (Direct) Cost	$ 35.1	$ 6.7	$ -	$ 33.0	$ -	$ 75.0	$ 75.7
Total Undistributed (Allocated) Cost	$ 38.9	$ 1.6	$ -	$ 18.9	$ -	$ 59.4	$ 60.0
Total North Anna ISFSI Decommissioning Cost	$ 74.0	$ 8.3	$ -	$ 51.9	$ -	$ 134.4	$ 135.7
25% Contingency Applied to Total North Anna ISFSI Decommissioning Cost Estimate					$ 33.6	$ 33.6	$ 33.9
Total North Anna ISFSI Decommissioning Cost Estimate with Contingency						$ 168.0	$ 169.6
Annual Escalation Rate (2014$ to 2015$)	1.09%	Escalation Rate based on average of CPI-U indices for period shown					
Decommissioning Cost shown at	10.74%	ODEC Decommissioning Responsibility Percentage					

[2] The mnemonic for CPI-U is shown under Item 4.

Information Required by 10 CFR 72.30(c)

10 CFR 72.30 (c) requires the updated decommissioning funding plan to specifically consider the effect of the following events on decommissioning costs:

i. Spills of radioactive material producing additional residual radioactivity in onsite subsurface material
There have been no reported spills at the ISFSI.

ii. Facility modifications
There have been no facility modifications affecting the ISFSI DCE.

iii. Changes in authorized possession limits
As stated below, the ISFSI DCE is based on ISFSIs that are sized, when used in conjunction with the spent fuel pool, to accommodate the spent fuel generated over the life of the station. There are no changes in authorized possession limits affecting the DCE.

iv. Actual remediation costs that exceed the previous cost estimate
No actual remediation costs have been incurred.

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

The DCE for the NAPS ISFSIs assumes:

i. ISFSIs that are sized, when used in conjunction with the spent fuel pool, to accommodate the spent fuel generated over the life of the station.

ii. Decommissioning will be performed by an independent contractor as required.

iii. Storage canisters will be used to ship the contained spent fuel to the Department of Energy. Single purpose canisters will be qualified for shipment or transported in licensed transportation overpacks to avoid the need for repackaging and will maintain occupational exposures as low as reasonably achievable.

iv. A dry transfer facility will not be necessary.

v. The ISFSI pads and support modules are assumed to be free of contamination and left in place.

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

ODEC uses an external sinking fund method for NAPS. The external sinking fund is based on site-specific cost estimates that include estimated ISFSI decommissioning costs. ODEC obtains these cost estimates

from Dominion Resources, Inc. approximately every five years to determine whether there is any need to adjust wholesale power rates and contributions to the external sinking fund. The ISFSI decommissioning funding plan periodically submitted pursuant to 10 CFR 72.30 (c) will further adjust the most recent site-specific ISFSI DCE using a CPI indice based escalation rate and will consider the need for any further adjustment based on the factors in 10 CFR 72.30(c)(1) – (4).

The CPI indice annual escalation rate mnemonic is as follows:

CPI - U: Urban Consumer - All Items, (Index 1982-84=100, SA), U.S. Bureau of Labor Statistics (BLS); Moody's Analytics (ECCA) Forecast, Quarterly, United States.

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

Onsite subsurface material associated with the NAPS ISFSIs is assumed to have no residual radioactivity that will require remediation to meet the criteria for license termination. The spent fuel storage casks are sealed and contain no liquid.

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

ODEC certifies that financial assurance for the estimated cost of decommissioning the NAPS ISFSIs has been provided as discussed above.