

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

October 31, 2011

10 CFR 100, Appendix A

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

Serial No.: 11-520B
NL&OS/GDM R1
Docket Nos.: 50-338/339
72-16/72-56
License Nos.: NPF-4/7
SNM-2507

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
INDEPENDENT SPENT FUEL STORAGE INSTALLATION
DETERMINATION OF RESTART READINESS AND
LONG-TERM ACTION PLAN TO BE COMPLETED AFTER UNIT RESTART

By letter dated September 17, 2011 (Serial No. 11-520), Virginia Electric and Power Company (Dominion) submitted a summary report of the response of North Anna Power Station to the August 23, 2011 Central Virginia earthquake, as well as a Restart Readiness Determination Plan to demonstrate that station structures, systems and components (SSCs) will continue to perform their required safety functions such that restart of North Anna Units 1 and 2 may commence. By letters dated September 27, 2011 (Serial No. 11-520A) and October 20, 2011 (Serial No. 11-566C), Dominion provided status updates of the plant activities and near-term action items associated with unit restart that had been completed and the results achieved. In addition, by letters dated September 27, 2011 (Serial No. 11-544), October 3, 2011 (Serial Nos. 11-544A and 11-566), October 10, 2011 (Serial Nos. 11-577 and 11-566A), October 17, 2011 (Serial Nos. 11-544B), October 18, 2011 (Serial Nos. 11-566B and 11-577A), October 20, 2011 (Serial No. 11-566C), October 25, 2011 (Serial Nos. 11-544C), October 28, 2011 (Serial Nos. 11-566D and 11-577B), and October 31, 2011 (Serial No. 11-566E), Dominion provided responses to NRC requests for additional information.

In light of the information provided to the NRC in the above correspondence, Dominion is hereby providing notification that the documentation requested by NRC Confirmatory Action Letter (CAL) dated September 30, 2011 has been provided. In addition, the near term actions to be completed prior to unit restart that were included in Enclosure 8 to Dominion's September 17, 2011 letter have been completed, with the exception of those items (surveillance tests) that are performed as part of a normal reactor startup or can only be performed in Mode 4 or above. Finally, Dominion has developed a plan to address the long-term actions to be completed after unit restart that were included in

ADD
NRR
NMSS

Enclosure 9 to the September 17, 2011 letter. The action plan is provided in Attachment 1.

Based on the information provided in Attachment 1, as well as the information provided to the NRC in the correspondence referenced above, it is Dominion's position that it has: 1) met the requirements of the NRC CAL, and 2) adequately demonstrated, pursuant to Paragraph V(a)(2) of 10 CFR 100, Appendix A, that no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public. Therefore, Dominion hereby requests NRC concurrence to restart North Anna Power Station Units 1 and 2.

The commitments contained in this letter are included in Attachment 2. If you have any questions or require additional information, please contact Mr. Gary D. Miller at (804) 273-2771.

Sincerely,


J. Alan Price
Vice President – Nuclear Engineering

Attachments:

1. Long-Term Action Plan to be Completed after Unit Restart
2. Commitments Contained in this Letter

COMMONWEALTH OF VIRGINIA)

COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by J. Alan Price who is Vice President – Nuclear Engineering, of Virginia Electric and Power Company. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 31st day of October, 2011.

My Commission Expires: 4/30/2015

Ginger Lynn Rutherford
NOTARY PUBLIC
Commonwealth of Virginia
Reg. # 310847
My Commission Expires 4/30/2015


Notary Public

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Attachment 1

Long-Term Action Plan to be Completed after Unit Restart

**Virginia Electric and Power Company
(Dominion)
North Anna Power Station Units 1 and 2**

Long-Term Actions to be Completed after Unit Restart
North Anna Power Station Units 1 and 2

1. *Provide permanent backup power to the Main Control Room Seismic Monitoring Panel.*

Dominion Response

By letter dated October 10, 2011 (Serial No. 11-577), Dominion stated that the Main Control Room (MCR) seismic indication had been enhanced by the installation of a seismically qualified uninterruptible power supply (UPS). The UPS provides backup power to the Kinometrics equipment and Engdahl peak shock alarms in the control room. A design change to upgrade the overall seismic monitoring system includes the installation of permanent, seismically qualified backup power by a UPS to a new MCR Seismic Monitoring Panel. A backup battery for the new seismic equipment will also be provided consistent with Regulatory Guide (RG) 1.12, Revision 2, "Nuclear Power Plant Instrumentation for Earthquakes." The schedule for the completion of the design change is provided in the response to Question 2 below.

2. *Install permanent free field seismic monitoring instrumentation.*

Dominion Response

As noted above, a design change has been initiated to replace the existing seismic equipment and MCR indication with upgraded and enhanced seismic monitoring instrumentation equipment. Permanent, free-field seismic equipment will be installed to facilitate the performance of Cumulative Absolute Velocity (CAV) calculations. The project will also install seismic recording instrumentation at the station Independent Spent Fuel Storage Installation (ISFSI) pad. As discussed in Dominion's letter dated October 28, 2011 (Serial No. 11-577B), the project is currently scheduled to begin equipment installation during the North Anna Unit 1 spring 2012 refueling outage and complete by December 31, 2012.

Pending the installation of the permanent free-field seismic instrumentation, an autonomous, temporary free-field seismic monitor was installed inside the North Anna Owner Controlled Area, east of the Training Building, in September 2011. This location was chosen because, as a result of recent soil borings for the Unit 3 site separation project, the soil composition is known. In addition, the Station Abnormal Procedure for seismic events was updated to include reference and use of the free-field monitor. Also, a procedure is in place for obtaining and evaluating free-field seismic data as it relates to CAV and an OBE or DBE exceedance determination. Both of these actions facilitate the station's ability to assess earthquake data within 4 hours of an earthquake as described in RG 1.166.

- 3. Re-evaluate plant equipment identified in the IPEEE review with HCLPF capacity <0.3g.*

Dominion Response

The plant equipment identified in the Individual Plant Examination of External Events (IPEEE) review with high-confidence-of-low probability-of-failure (HCLPF) capacity less than 0.3g will be ranked by risk significance and re-evaluated accordingly. The re-evaluation, including assessment for potential improvements, will be completed by March 31, 2013. Any subsequent modifications identified during the re-evaluation will be scheduled and completed in a time frame commensurate with their importance to safety.

- 4. Perform seismic evaluations in the context of EPRI NP-6695, NRC GI-199 and as an outcome of NRC Task Force recommendations identified in SECY-11-0124.*

Dominion Response

In-Structure Response Spectra (ISRS) for the August 23, 2011 earthquake for the Containment, Auxiliary Building, and other safety related structures will be developed based on actual time-histories recorded during this event. It is expected that the development of the ISRS for the August 23, 2011 earthquake will be completed in about one year. The ISRS will be used in the seismic evaluations performed in accordance with EPRI NP-6695, "Guidelines for Nuclear Plant Response to an Earthquake," as described in Dominion's letter dated October 28, 2011 (Serial No. 11-577B).

- 5. Develop a plan with the NSSS vendor consisting of additional evaluations or inspections, as warranted; to assure long term reliability of the reactor internals.*

Dominion Response

Dominion and Westinghouse, the NSSS vendor, have initiated interactions to satisfy this long term action. Items to be considered in this review include the correspondence and supporting evaluations already performed in response to the August 23, 2011 event, in conjunction with current reactor internals inspection plans. This item will be completed by February 29, 2012.

Attachment 2

Commitments Contained in this Letter

**Virginia Electric and Power Company
(Dominion)
North Anna Power Station Units 1 and**

Commitments Contained in this Letter

Commitment	Completion Date
1. Dominion will implement a design change to replace the existing seismic equipment and Main Control Room indication with upgraded and enhanced seismic monitoring instrumentation equipment, including the installation of permanent, seismically qualified backup power to a new Seismic Monitoring Panel and a backup battery power supply. The project will also install seismic recording instrumentation at the station Independent Spent Fuel Storage Installation (ISFSI) pad.	December 31, 2012
2. Dominion will perform a re-evaluation of the plant equipment identified in the IPEEE review with HCLPF capacity <0.3g, which will include an assessment for potential improvements.	March 31, 2013
3. Dominion will develop a plan with the NSSS vendor consisting of additional evaluations or inspections, as warranted, to assure long term reliability of the reactor internals.	February 29, 2012