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United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

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VIRGINIA ELECTRIC AND POWER COMPANY
DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNITS 2 AND 3
NORTH ANNA AND SURRY POWER STATIONS UNITS 1 AND 2
COMMITMENTS FOR RESOLUTION OF ANCHOR DARLING DOUBLE DISC GATE
VALVE PART 21 ISSUES

- References: 1) Letter from Greg Krueger (NEI) to Mr. John Lubinski, U.S. Nuclear Regulatory Commission, "Anchor Darling Double Disc Gate Valve Industry Resolution Plan Update (Project 689)," dated August 4, 2017
- 2) Letter from Mr. Brian Holian, U.S. Nuclear Regulatory Commission, to Greg Krueger (NEI), "Response from the Nuclear Regulatory Commission Regarding the Anchor Darling Double Disc Gate Valve Industry Resolution Plan," dated July 31, 2017
- 3) Part 21 Notification from Flowserve Corporation, "Part 21 – Wedge Pin Failure in Anchor Darling Motor Operated Double Disc Gate Valves with Threaded Stem to Upper Wedge Connections," dated March 1, 2013 as modified July 11, 2017
- 4) BWROG Topical Report TP-16-1-112 Rev. 4, Recommendations to Resolve Flowserve 10CFR Part 21 Notification Affecting Anchor Darling Double Disc Gate Valve Wedge Pin Failures

In Reference 1, the Nuclear Energy Institute (NEI) provided the NRC a near-term plan for the U.S. Nuclear Industry to address the known Anchor Darling Double Disk Gate Valve (ADDDGV) issues leading up to the February 2017 LaSalle County Station, Unit 2 valve stem-disc separation on a High Pressure Core Spray Motor Operated Valve (MOV). The NEI letter states that each affected utility will communicate to the NRC by August 31, 2017 a list of "High Significance" ADDDGVs for their stations and an associated repair schedule. "High Significance" ADDDGVs, as defined by NEI, are safety related MOVs having an active safety function to either Open or Open/Close with

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an "UNSAT" wedge pin analysis. The scope of valves for Virginia Electric and Power Company (Dominion Energy Virginia) include two MOVs at North Anna Power Station Unit 2 and two MOVs at Surry Power Station Unit 2. There are no High Significance ADDDGVs at Millstone Power Station.

The attachment contains commitments regarding the repair and resolution of High Significance ADDDGVs at North Anna Unit 2 and Surry Unit 2. High Significance ADDDGVs were determined using the procedurally established, NRC approved Joint Owner's Group Generic Letter (GL) 96-05 Risk Ranking Methodology which includes High, Medium and Low Risk Significant GL 96-05 MOVs.

Dominion Energy Virginia and Dominion Nuclear Connecticut, Inc. (DNC) have been closely following the efforts of the Boiling Water Reactors Owners Group (BWROG) committee that is developing corrective actions and maintenance activities to ensure proper functioning of the ADDDGVs. Millstone, North Anna and Surry Power Stations will comply with the Reference 4 recommended actions to address applicable GL 96-05 MOVs affected by the ADDDGV Part 21. The requirements for each category of valves is in accordance with the BWROG simplified recommendations and schedule for Part 21 applicable MOVs. These include the following aspects:

- Screening evaluation method for susceptible MOVs
- Wedge Pin Analysis
- Stem Rotation Check Methods
- Diagnostic Test / Evaluation Methods
- Valve Repair Methods
- Repair Schedule

A brief explanation of the specific valve repair and test/inspection commitment scope as contained in the attachment is provided as follows:

Category A – The Category A valve group includes susceptible High or Medium Risk GL 96-05 MOVs that traverse (Open/Close) multiple times to perform their active safety function. This valve group will be repaired by the next refueling outage (RFO) /within 2 years. There are two MOVs at Surry Unit 2 included in this Category: Mark Nos. 02-SI-MOV-2867D and 02-SI-MOV-2890C. The safety function of 02-SI-MOV-2867D is to provide High Head Safety Injection (HHSI) pump flow to the Reactor Coolant System (RCS) Cold Legs, and the safety function of 02-SI-MOV-2890C is to provide Low Head Safety Injection (LHSI) pump flow to the RCS Cold Legs. There are no Category A MOVs at North Anna.

Category B – The Category B valve group includes susceptible High or Medium Risk GL 96-05 MOVs that only traverse once, Open or Close, to perform their safety function. This valve group will be repaired by the next RFO OR pass diagnostic tests and stem rotation checks during the next RFO with final repair within two RFOs/four years (as applicable). The one North Anna Unit 2 MOV included in this Category is Mark No.

02-RH-MOV-2720B. The safety function of this MOV is to Open to provide Residual Heat Removal flow to the Reactor Coolant System (RCS) via the Safety Injection (SI) accumulator discharge line. There are no Category B MOVs at Surry.

Category C – The Category C valve group includes susceptible Low Risk GL 96-05 MOVs that have an active safety function to either Open or Open and Close. This valve group will be repaired by the next RFO OR pass diagnostic tests and stem rotation checks during the next two RFOs with final repair within three RFOs/six years (as applicable). The only MOV that meets this Category for North Anna Unit 2 is Mark No. 02-SI-MOV-2890A. The safety function of this MOV is to Open/Close to provide Low Head Safety Injection (LHSI) pump flow/isolation, as required, to the RCS Hot Legs during post-LOCA recirculation mode. There are no Category C MOVs at Surry.

Also in Reference 1, NEI states that susceptibility reviews and repair plans for the safety related ADDDGVs against the revised BWROG Guidance (Reference 4) will be communicated to the NRC by December 31, 2017. Dominion Energy Virginia and DNC will communicate this information, including repair schedule commitments as applicable, in a separate letter in accordance with the NEI Plan.

Should you have any questions or require additional information, please contact Mr. Gary D. Miller at (804) 273-2771.

Respectfully,

A handwritten signature in black ink, appearing to read "Mark D. Sartain", followed by a horizontal line.

Mark D. Sartain
Vice President – Nuclear Engineering and Fleet Support
Virginia Electric and Power Company
Dominion Energy Nuclear Connecticut, Inc.

Summary of Regulatory Commitments:

See the attachment for commitments associated with this letter.

cc: U.S. Nuclear Regulatory Commission - Region I
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Attachment

SUMMARY OF REGULATORY COMMITMENTS

**Virginia Electric and Power Company
(Dominion Energy Virginia)
North Anna Power Station Unit 2
Surry Power Station Unit 2**

SUMMARY OF REGULATORY COMMITMENTS

The following table identifies commitments made in this document for North Anna Power Station Unit 2 and Surry Power Station Unit 2. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

COMMITMENT	COMMITTED DATE OR "OUTAGE"*
<p><i>Category A MOVs to be repaired at the next refueling outage:</i></p> <p><u>Surry Power Station Unit 2:</u></p> <p><u>Valve Number</u> 02-SI-MOV-2867D 02-SI-MOV-2890C</p>	<p><u>Outage (Year)</u> 2R28 (2018) 2R28 (2018)</p>
<p><i>Category B MOV to be repaired at the next refueling outage OR pass diagnostic tests and stem rotation checks during the next refueling outage (with final repair within two refueling outages, as applicable).</i></p> <p><u>North Anna Power Station Unit 2:</u></p> <p><u>Valve Number</u> 02-RH-MOV-2720B</p>	<p><u>Outage (Year)</u> 2R26 (2019)</p>
<p><i>Category C MOV to be repaired at the next refueling outage OR pass diagnostic tests during each of the next two refueling outages and be repaired within three refueling outages/six years:</i></p> <p><u>North Anna Power Station Unit 2:</u></p> <p><u>Valve Number</u> 02-SI-MOV-2890A</p>	<p><u>Outage (Year)</u> 2R27 (2020)</p>

(* - Note: The Commitment Date/Outage refers to the date of completion of the final corrective action.)