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

Serial No. NA3-11-011R  
Docket No. 52-017  
COL/DWL

**DOMINION VIRGINIA POWER**  
**NORTH ANNA UNIT 3 COMBINED LICENSE APPLICATION**  
**SRP 03.09.06: RESPONSE TO RAI LETTER 61**

On February 23, 2011, the NRC requested additional information to support the review of certain portions of the North Anna Unit 3 Combined License Application (COLA). The responses to the following Request for Additional Information (RAI) Questions are provided in Enclosures 1 through 3:

- RAI 5496 Question 03.09.06-7 Basis for Deferral of Exercise Testing
- RAI 5496 Question 03.09.06-8 License Condition for Program Implementation
- RAI 5496 Question 03.09.06-9 Provisions for Site-Specific Valves

This information will be incorporated into a future submission of the North Anna Unit 3 COLA, as described in the enclosures.

Please contact Regina Borsh at (804) 273-2247 (regina.borsh@dom.com) if you have questions.

Very truly yours,

A handwritten signature in black ink, appearing to read "Eugene S. Grecheck".

Eugene S. Grecheck

D089  
NRD

Enclosures:

1. Response to RAI Letter Number 61, RAI 5496 Question 03.09.06-7
2. Response to RAI Letter Number 61, RAI 5496 Question 03.09.06-8
3. Response to RAI Letter Number 61, RAI 5496 Question 03.09.06-9

Commitments made by this letter:

1. Incorporate proposed changes in a future COLA submission.

COMMONWEALTH OF VIRGINIA

COUNTY OF HENRICO

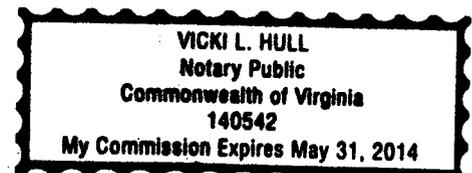
The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Eugene S. Grecheck, who is Vice President-Nuclear Development of Virginia Electric and Power Company (Dominion Virginia Power). He has affirmed before me that he is duly authorized to execute and file the foregoing document on behalf of the Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 22<sup>nd</sup> day of March, 2011.

My registration number is 140542 and my

Commission expires: May 31, 2014

Vicki L. Hull  
Notary Public



cc: U. S. Nuclear Regulatory Commission, Region II  
C. P. Patel, NRC  
T. S. Dozier, NRC  
J. T. Reece, NRC

**ENCLOSURE 1**

**Response to NRC RAI Letter 61**

**RAI 5496 Questions 03.09.06-7**

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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**North Anna Unit 3**

**Dominion**

**Docket No. 52-017**

**RAI NO.: 5496 (RAI Letter 61)**

**SRP SECTION: 03.09.06 – FUNCTIONAL DESIGN QUALIFICATION AND  
INSERVICE TESTING PROGRAMS FOR PUMPS, VALVES, AND  
DYNAMIC RESTRAINTS**

**QUESTIONS for Component Integrity, Performance, and Testing Branch 1  
(AP1000/EPR Projects) (CIB1)**

**DATE OF RAI ISSUE: 2/23/2011**

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**QUESTION NO.: 03.09.06-7**

In its letter dated November 10, 2010, regarding the North Anna Unit 3 US-APWR subsequent COL application (S-COLA), Dominion indicates its endorsement of specific responses to requests for additional information (RAIs) submitted by Luminant for the Comanche Peak Units 3 and 4 US-APWR reference COL application (R-COLA). In its letter, Dominion indicates that it does not endorse the response provided by Luminant in a letter dated October 29, 2009, to RAI 03.09.06-7 prepared on the Comanche Peak Units 3 and 4 R-COLA. Therefore, the NRC staff requests that Dominion discuss the basis for the deferral of exercise testing without a partial stroke test at a quarterly interval for the specific valves identified by Note 6 to North Anna 3 FSAR (Revision 3) Table 3.9-203, "Site-Specific Active Valve IST Requirements," which states that exercise testing will be performed at cold shutdown to avoid impact on power operation.

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**Dominion Response**

Note 6 to FSAR Table 3.9-203, "Site-Specific Active Valve IST Requirements," stated that exercising the noted valves could have an impact on power operation. Accordingly, they were deferred to cold shutdown testing. Subsequently, it was determined that an operational impact does not exist if the valves are tested at-power. Therefore, the valves identified by Note 6 on FSAR Table 3.9-203 will be tested with a full stroke test quarterly and not deferred to cold shutdown. The test frequency described in the "Inservice Testing Type and Frequency" column of FSAR Table 3.9-203 (Sheets 1

through 5) has been modified to state "Exercise Full Stroke/Quarterly" for the following valves:

UHS-MOV-503A, B, C, D

UHS-MOV-506A, B, C, D

UHS-MOV-507A, B, C, D

UHS-MOV-508A, B, C, D

UHS-MOV-509A, B, C, D

UHS-MOV-510A, B, C, D

EWS-HCV-2000, 2001, 2002, 2003

Note 6 is deleted from the Notes column for the above valves, and the note description is changed to state: "Not used."

The deletion of Note 6 in FSAR Table 3.9-203 is consistent with changes that were proposed for the R-COLA response to RAI 03.09.06-7 referenced in the NRC question.

### **Proposed COLA Revision**

FSAR Table 3.9-203 will be revised as indicated on the attached markup.

### **Markup of North Anna COLA**

The attached markup represents Dominion's good faith effort to show how the COLA will be revised in a future COLA submittal in response to the subject RAI. However, the same COLA content may be impacted by revisions to the DCD, responses to other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be somewhat different than as presented herein.

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**NAPS COL 3.9(12) Table 3.9-203 Site-Specific Active Valve IST Requirements**

Valve Tag Number	Description	Valve Type	Safety-Related Missions	Safety Functions	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
UHS-VLV-502A	A-UHS Transfer Pump Discharge Check Valve	Check	Transfer Close Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3
UHS-VLV-502B	B-UHS Transfer Pump Discharge Check Valve	Check	Transfer Close Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3
UHS-VLV-502C	C-UHS Transfer Pump Discharge Check Valve	Check	Transfer Close Transfer Open	Active	BC	Check Exercise / Refueling Outage	3
UHS-VLV-502D	D-UHS Transfer Pump Discharge Check Valve	Check	Transfer Close Transfer Open	Active	BC	Check Exercise / Refueling Outage	3
UHS-MOV-503A	A-UHS Transfer Pump Discharge Valve	Remote	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly Operability Test</u>	6
UHS-MOV-503B	B-UHS Transfer Pump Discharge Valve	Remote	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly Operability Test</u>	6
UHS-MOV-503C	C-UHS Transfer Pump Discharge Valve	Remote	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly Operability Test</u>	6
UHS-MOV-503D	D-UHS Transfer Pump Discharge Valve	Remote	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly Operability Test</u>	6

**NAPS COL 3.9(12) Table 3.9-203 Site-Specific Active Valve IST Requirements**

Valve Tag Number	Description	Valve Type	Safety-Related Missions	Safety Functions	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
UHS-MOV-506A	A-UHS Transfer Line Basin Inlet Valve	Remote	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-506B	B-UHS Transfer Line Basin Inlet Valve	Remote	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-506C	C-UHS Transfer Line Basin Inlet Valve	Remote	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-506D	D-UHS Transfer Line Basin Inlet Valve	Remote	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-507A	A-UHS Transfer Pump Discharge Valve (Winter Operation)	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-507B	B-UHS Transfer Pump Discharge Valve (Winter Operation)	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-507C	C-UHS Transfer Pump Discharge Valve (Winter Operation)	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6

**NAPS COL 3.9(12) Table 3.9-203 Site-Specific Active Valve IST Requirements**

Valve Tag Number	Description	Valve Type	Safety-Related Missions	Safety Functions	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
UHS-MOV-507D	D-UHS Transfer Pump Discharge Valve (Winter Operation)	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-508A	A-UHS Winter Operation Basin Inlet Valve	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-508B	B-UHS Winter Operation Basin Inlet Valve	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-508C	C-UHS Winter Operation Basin Inlet Valve	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-508D	D-UHS Winter Operation Basin Inlet Valve	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-509A	A-UHS Cooling Tower Isolation Valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-509B	B-UHS Cooling Tower Isolation Valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6

**NAPS COL 3.9(12) Table 3.9-203 Site-Specific Active Valve IST Requirements**

Valve Tag Number	Description	Valve Type	Safety-Related Missions	Safety Functions	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
UHS-MOV-509C	C-UHS Cooling Tower Isolation Valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-509D	D-UHS Cooling Tower Isolation Valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-510A	A-UHS Cooling Tower Bypass Valve	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-510B	B-UHS Cooling Tower Bypass Valve	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-510C	C-UHS Cooling Tower Bypass Valve	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
UHS-MOV-510D	D-UHS Cooling Tower Bypass Valve	Remote MO Butterfly	Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
EWS-HCV-2000	A-UHS Blowdown Control Valve	Remote	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6

**NAPS COL 3.9(12) Table 3.9-203 Site-Specific Active Valve IST Requirements**

Valve Tag Number	Description	Valve Type	Safety-Related Missions	Safety Functions	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EWS-HCV-2001	B-UHS Blowdown Control Valve	Remote	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
EWS-HCV-2002	C-UHS Blowdown Control Valve	Remote	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6
EWS-HCV-2003	D-UHS Blowdown Control Valve	Remote	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ <del>Cold Shutdown</del> <u>Quarterly</u> Operability Test	6

Notes:

- 1) Not used.
- 2) Not used.
- 3) The check valve exercise test is performed during refueling outage. Valves in the inaccessible primary containment can not be tested during power operation. Test of valves in operating systems may cause impact of power operation. Simultaneous testing of valves in the same system group will be considered.
- 4) Not used.
- 5) Not used.
- 6) ~~Exercising these valves would stop necessary line for operation such as utilities etc. Therefore, exercise testing will be performed at cold shutdown to avoid impact on power operation.~~ Not used
- 7) Not used.
- 8) Not used.
- 9) Not used.
- 10) Not used.
- 11) Not used.
- 12) Not used.

**ENCLOSURE 2**

**Response to NRC RAI Letter 61**

**RAI 5496 Question 03.09.06-8**

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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**North Anna Unit 3**

**Dominion**

**Docket No. 52-017**

**RAI NO.: 5496 (RAI Letter 61)**

**SRP SECTION: 03.09.06 Functional Design Qualification and Inservice Testing Programs for Pumps, Valves, and Dynamic Restraints**

**QUESTIONS for Component Integrity, Performance, and Testing Branch 1 (AP1000/EPR Projects) (CIB1)**

**DATE OF RAI ISSUE: 02/23/2011**

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**QUESTION NO.: 03.09.06-8**

In its letter dated November 10, 2010, regarding the North Anna Unit 3 US-APWR S-COLA, Dominion indicates its endorsement of specific RAI responses submitted by Luminant for the Comanche Peak Units 3 and 4 US-APWR R-COLA. In its letter, Dominion indicates that it does not endorse the response provided by Luminant in a letter dated October 29, 2009, to RAI 03.09.06-12 prepared on the Comanche Peak Units 3 and 4 R-COLA. Therefore, the NRC staff requests that Dominion discuss the plans to develop license conditions for implementation of the inservice testing (IST) and motor-operated valve (MOV) operational programs consistent with the guidance in Commission paper SECY-05-0197 and Regulatory Guide 1.206.

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**Dominion Response**

The North Anna Unit 3 Subsequent-Combined Operating License (S-COLA) does not contain proposed license conditions. The NRC is currently developing model license conditions for a COL, including those required for implementation of the IST and MOV operational programs. Dominion expects that the NRC will use these model license conditions in developing the North Anna Unit 3 COL. The IST and MOV operational programs will be implemented as identified in FSAR Table 13.4-201, and will be consistent with 10 CFR 50.55a.

**Proposed COLA Revision**

None

**ENCLOSURE 3**

**Response to NRC RAI Letter 61**

**RAI 5496 Questions 03.09.06-9**

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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**North Anna Unit 3**

**Dominion**

**Docket No. 52-017**

**RAI NO.: 5496 (RAI Letter 61)**

**SRP SECTION: 03.09.06 – FUNCTIONAL DESIGN QUALIFICATION AND  
INSERVICE TESTING PROGRAMS FOR PUMPS, VALVES,  
AND DYNAMIC RESTRAINTS**

**QUESTIONS for Component Integrity, Performance, and Testing Branch 1  
(AP1000/EPR Projects) (CIB1)**

**DATE OF RAI ISSUE: 2/23/2011**

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**QUESTION NO.: 03.09.06-9**

North Anna 3 FSAR (Revision 3) Table 3.9-203, "Site-Specific Active Valve IST Requirements," includes site-specific valves not listed in the IST table in the Comanche Peak Units 3 and 4 FSAR (Revision 1). These valves include UHS-MOV-507A to D, UHS-MOV-508A to D, UHS-MOV-509A to D, and UHS-MOV-510A to D. The NRC staff requests that Dominion confirm that the provisions in the US-APWR Design Certification Design Control Document and Comanche Peak Units 3 and 4 US-APWR R-COLA FSAR for the functional design, qualification, and IST programs will be applied to these site-specific valves for North Anna Unit 3, or describe the plant-specific programs for these valves.

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**Dominion Response**

The provisions in the US-APWR Design Certification Design Control Document for the functional design, qualification, and IST programs are incorporated by reference in the North Anna Unit 3 FSAR. Dominion confirms that these provisions, along with the supplemental information included in the North Anna Unit 3 FSAR, are applicable to the following Unit 3 site-specific valves:

UHS-MOV-507A, B, C, D

UHS-MOV-508A, B, C, D

UHS-MOV-509A, B, C, D

UHS-MOV-510A, B, C, D

**Proposed COLA Revision**

None