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December 16, 2011

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

Serial No. NA3-11-062R
Docket No. 52-017
COL/WDC

DOMINION VIRGINIA POWER
NORTH ANNA UNIT 3 COMBINED LICENSE APPLICATION
SRP 13.06.01: RESPONSE TO RAI LETTER 89

On November 9, 2011 the NRC requested additional information to support the review of certain portions of the North Anna Unit 3 Combined License Application (COLA) which consisted of seven questions. The responses to the following six Request for Additional Information (RAI) Questions are provided in Enclosures 1 through 6:

- RAI 6008 Question 13.06.01-53 Include ISFSI Reference in Physical Layout
- RAI 6008 Question 13.06.01-54 Justify Language in Section 2
- RAI 6008 Question 13.06.01-55 Clarify SSACB
- RAI 6008 Question 13.06.01-56 Clarify Sentence in Section 14.4.6
- RAI 6008 Question 13.06.01-57 Provide Information on Supplement to High Assurance Evaluation Assessment
- RAI 6008 Question 13.06.01-58 Include Target Sets Not Included

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

The response to Question 13.06.01-58 references a revision to the Physical Security Protection Systems Report (PSPSR). As discussed with M. Takacs, the NRC's North Anna Unit 3 Security Project Manager, on December 6, 2011, the revised PSPSR will be provided by February 29, 2012.

The response to Question 13.06.01-59 contains Safeguards Information and is provided in a separate letter dated December 16, 2011 (Serial No. NA3-11-062RA).

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

Very truly yours,

Eugene S. Grecheck

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NRO

Enclosures:

1. Response to RAI Letter Number 89, RAI 6008 Question 13.06.01-53
2. Response to RAI Letter Number 89, RAI 6008 Question 13.06.01-54
3. Response to RAI Letter Number 89, RAI 6008 Question 13.06.01-55
4. Response to RAI Letter Number 89, RAI 6008 Question 13.06.01-56
5. Response to RAI Letter Number 89, RAI 6008 Question 13.06.01-57
6. Response to RAI Letter Number 89, RAI 6008 Question 13.06.01-58

Commitments made by this letter:

1. Incorporate proposed changes in a future COLA submission.
2. Provide revised PSPSR associated with response to RAI 6008 Question 13.06.01-58 by February 29, 2012.

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 16th day of December, 2011
My registration number is 112536 and my
Commission expires: April 30, 2015

Jane K. Macek
Notary Public

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

ENCLOSURE 1

Response to NRC RAI Letter 89

RAI 6008 Question 13.06.01-53

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

North Anna Unit 3

Dominion

Docket No. 52-017

RAI NO.: 6008 (RAI Letter 89)

SRP SECTION: 13.06.01 – PHYSICAL SECURITY

QUESTIONS for Reactor Security Rulemaking and Licensing Branch (NSIR/DSP/RSRLB)

DATE OF RAI ISSUE: 11/09/2011

QUESTION NO.: 13.06.01-53

Physical Security Plan, page 1, section 1.1. List all site structures, (e.g. ISFSI etc.)

Regulatory Basis: Title 10 CFR 73, Appendix C, Section II (B)(3)(b), Physical Layout, requires the safeguards contingency plan to "include a site map depicting the physical structures located on the site, including onsite independent spent fuel storage installations (if applicable), and a description of the structures depicted on the map. Plans must also include a description and map of the site in relation to nearby towns, transportation routes (e.g., rail, water, and roads), pipelines, airports, hazardous material facilities, and pertinent environmental features that may have an effect upon coordination of response activities. Descriptions and maps must indicate main and alternate entry routes for law enforcement or other offsite response and support agencies and the location for marshalling and coordinating response activities.

Dominion Response

The site structures, including the ISFSI for North Anna Units 1 and 2, are shown on Figure 3 of the COLA Physical Security Plan. Section 1.1 will be revised to add the words "and including ISFSI for Units 1 and 2" to the end of the eighth sentence.

Proposed COLA Revision

COLA PSP will be revised as described in the response.

ENCLOSURE 2

Response to NRC RAI Letter 89

RAI 6008 Question 13.06.01-54

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

North Anna Unit 3

Dominion

Docket No. 52-017

RAI NO.: 6008 (RAI Letter 89)

SRP SECTION: 13.06.01 – PHYSICAL SECURITY

QUESTIONS for Reactor Security Rulemaking and Licensing Branch (NSIR/DSP/RSRLB)

DATE OF RAI ISSUE: 11/09/2011

QUESTION NO.: 13.06.01-54

Physical Security Plan, page 2, section 2, second sentence from the bottom. Justify the added language "or equivalent measure that meet the same high assurance objectives provided by paragraphs (a) through (r)".

Regulatory Basis: Title 10 CFR 52.6, Completeness and accuracy of information, requires information provided "shall be complete and accurate in all material respects."

Dominion Response

The language "or equivalent measure that meet the same high assurance objectives provided by paragraphs (a) through (r)" is taken verbatim from the NRC endorsed NEI 03-12, Revision 6 template.

It is understood the NEI 03-12 template has been recently revised and endorsed by the NRC. The COLA Physical Security Plan (PSP) will be updated to incorporate the latest version of the template. The updated COLA PSP will be included in a subsequent submission of the COLA.

Proposed COLA Revision

The COLA PSP will be revised as described in the response.

ENCLOSURE 3

Response to NRC RAI Letter 89

RAI 6008 Question 13.06.01-55

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

North Anna Unit 3

Dominion

Docket No. 52-017

RAI NO.: 6008 (RAI Letter 89)

SRP SECTION: 13.06.01 – PHYSICAL SECURITY

QUESTIONS for Reactor Security Rulemaking and Licensing Branch (NSIR/DSP/RSRLB)

DATE OF RAI ISSUE: 11/09/2011

QUESTION NO.: 13.06.01-55

Physical Security Plan, page 10, section 11.3. Clarify whether or not North Anna Power Station has a SSACB.

Regulatory Basis: Title 10 CFR 52.6, Completeness and accuracy of information, requires information provided "shall be complete and accurate in all material respects."

Dominion Response

In a previous revision of the COLA Physical Security Plan (PSP), which was based on the operating fleet PSP, reference was made to SSACB. North Anna Power Station does have a SSACB, however, in the COLA PSP, Revision 3, the security access buildings are called by their names, the Security Access Control Building and Southeast Security Building, rather than by the titles of SACB and SSACB.

Proposed COLA Revision

None

ENCLOSURE 4

Response to NRC RAI Letter 89

RAI 6008 Question 13.06.01-56

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

North Anna Unit 3

Dominion

Docket No. 52-017

RAI NO.: 6008 (RAI Letter 89)

SRP SECTION: 13.06.01 – PHYSICAL SECURITY

QUESTIONS for Reactor Security Rulemaking and Licensing Branch (NSIR/DSP/RSRLB)

DATE OF RAI ISSUE: 11/09/2011

QUESTION NO.: 13.06.01-56

Physical Security Plan, page 19, section 14.4.6. Clarify if the sentence that contains "The applicable site at which access is being requested" is corporate language or language that pertains only to North Anna Power Station. If corporate language, clarify the statement for this COL application.

Regulatory Basis: Title 10 CFR 52.6, Completeness and accuracy of information, requires information provided "shall be complete and accurate in all material respects."

Dominion Response

The language "The applicable site at which access is being requested" is used in the operating fleet Physical Security Plan (PSP). This language was overlooked when separating the North Anna units from the operating fleet PSP to create the COLA PSP, Revision 3. The sentence will be revised to replace the words "The applicable site at which access is being requested" with "The site".

Proposed COLA Revision

The COLA PSP will be revised as described in the response.

ENCLOSURE 5

Response to NRC RAI Letter 89

RAI 6008 Question 13.06.01-57

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

North Anna Unit 3

Dominion

Docket No. 52-017

RAI NO.: 6008 (RAI Letter 89)

SRP SECTION: 13.06.01 – PHYSICAL SECURITY

QUESTIONS for Reactor Security Rulemaking and Licensing Branch (NSIR/DSP/RSRLB)

DATE OF RAI ISSUE: 11/09/2011

QUESTION NO.: 13.06.01-57

North Anna Power Station Unit 3, Supplement to US-APWR High Assurance Evaluation Assessment, Revision 0, dated April 2010:

1) Provide clarification as to if the North Anna Power Station Unit 3, "Supplement to US-APWR High Assurance Evaluation Assessment," Revision 0, dated April 2010 is still applicable or has it been replaced in its entirety by the North Anna Power Station Unit 3, "Physical Security Protection System Report," Revision 1, dated July 2011?

2) If the "Supplement to US-APWR High Assurance Evaluation Assessment," Revision 0, has been replaced in its entirety by the North Anna Power Station Unit 3, "Physical Security Protection System Report," Revision 1, is Figure 1, "MSSD Boundary for the North Anna Unit 3," from the "Supplement to US-APWR High Assurance Evaluation Assessment" going to be included in the next revision of the "Physical Security Protection System Report?"

Regulatory Basis: 10 CFR 73.55 (c), Security Plans, states that the Licensee security plans must describe the site-specific conditions that affect how the licensee implements Commission requirements. In addition, Title 10 CFR 73.55(b)(3) requires the applicant design the physical protection program to prevent significant core damage and spent fuel sabotage with assurance of the capabilities to detect, assess, interdict, and neutralize the DBT, and maintain at all times such capabilities with defense-in-depth. Title 10 CFR 73.55(b)(4) requires the applicant to analyze and identify site specific conditions, including target sets, that may affect the specific measures needed to implement the requirements of 10 CFR 73 and account for conditions in the design of the physical protection program. Complete and accurate information (i.e., descriptions) is needed for the staff to perform its review.

Dominion Response

1) The North Anna Power Station Unit 3 Supplement to US-APWR High Assurance Evaluation Assessment is still applicable.

2) Figure 1, "MSSD Boundary for the North Anna Unit 3," remains in the North Anna Power Station Unit 3 Supplement to US-APWR High Assurance Evaluation Assessment. Figure 1 was revised in Revision 1 of the report, and was submitted in Dominion letter dated December 5, 2011 (Serial No. NA3-11-051).

Proposed COLA Revision

None

ENCLOSURE 6

Response to NRC RAI Letter 89

RAI 6008 Question 13.06.01-58

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

North Anna Unit 3

Dominion

Docket No. 52-017

RAI NO.: 6008 (RAI Letter 89)

SRP SECTION: 13.06.01 – PHYSICAL SECURITY

QUESTIONS for Reactor Security Rulemaking and Licensing Branch (NSIR/DSP/RSRLB)

DATE OF RAI ISSUE: 11/09/2011

QUESTION NO.: 13.06.01-58

The following is a supplemental Question for RAI 5232, Question No. 13.06.01-33 for closure and development of an SE with O/I:

Regarding TR UAP-SGI-08002, Revision 2 Section 4.0 discussions and Table 4.1 and discussions in the PSPSR, Sections 3.0 through 3.3 to include Target Set Groups that were not selected based on application of criteria greater than 8-hours as a threshold for eliminating sequences of events leading to core damage and loss of SFP cooling. The inclusion of all Target Set Groups currently identified as "not selected" in Section 4 discussions including Table 4-1 of UAP-SGI-08002, Revision 2 would provide an accurate and complete target sets acceptable for what must be protected for the USAPWR standard design for radiological sabotage.

Regulatory Basis: Subpart C of Title 10 CFR Part 52, § 52.79(a)(35)(i), (ii), and (iv) requires that the Combined license (COL) applicant submit information in the COL application that discusses how the applicant will meet the requirements of 10 CFR 73. Title 10 CFR 73.55(b)(3) requires the applicant design the physical protection program to prevent significant core damage and spent fuel sabotage with assurance of the capabilities to detect, assess, interdict, and neutralize the DBT, and maintain at all times such capabilities with defense-in-depth. Title 10 CFR 73.55(b)(4) requires the applicant to analyze and identify site specific conditions, including target sets, that may affect the specific measures needed to implement the requirements of 10 CFR 73 and account for conditions in the design of the physical protection program. Target sets must be sufficiently complete and accurate and describe what must be protected for meeting performance requirements of Title 10 CFR 73.55(b)(3). Deletion of TSG identified based on time constraints is contrary to regulatory requirements and does not conform to guidance provided RG 5.81. Based on review of RAI response, including the revised PSPSR and TR UAP-SGI-08002, Revision 2, High Assurance Evaluation Assessment, that is incorporated by reference, the supplemental questions to RAI previously issued is required to achieve full closure and development of an SE with no Open Item.

The supplemental follow-up question above relates to RAI Question No. 13.06.01-33 (RAI No. 5232), that requested the following:

> a. (U) Provide the technical bases for applying the criteria of greater than 8-hours as a threshold for core damage or the loss of spent fuel pool cooling in selecting TSG identified in the PSPSR Sections 3.0 through 3.3 and UAP-SGI-08002, Revision 2, Table 4.1. Justify how both the PSPSR and the referenced technical report meets the requirement of 10 CFR 73.55(b)(3) that the physical protection program must be designed to prevent significant core damage and spent fuel sabotage. This regulation does not establish constraints based on duration to core damage and excluded TSG, which would be unprotected to prevent the adversary capabilities of the design basis threat (DBT) to initiate the sequence of events for radiological sabotage.

Regarding TR UAP-SGI-08002, Revision 2 and discussions in the PSPSR, Sections 3.0 through 3.3, it may be retained to describe the possible capabilities of recovering or possible outcome as from a DBT event (i.e., defense-in-depth). The applicant's licensing basis described in the COLA does not address the capabilities of required engineered, administrative, and management controls, including training and pre-planning, to support the assumption of "regain[ing] control of the plant after a security event," within a time frame (i.e., 8 hrs). Specifically, the plans and strategy described do not describe how engineered and administrative controls and management measures, including the assurance of the reliability and availability of offsite law enforcement agencies and licensee's personnel and equipment, provide the response capabilities necessary to support the assumption stated.

Dominion Response

The Physical Security Protection Systems Report (PSPSR) will be revised to 1) eliminate the criteria of greater than 8-hours as a threshold to core damage, 2) include the target set groups that were identified in Table 4-1 of MHI TR UAP-SGI-08002 as not selected based on this time constraint, and 3) add timelines and scenarios to address the added target set groups.

Proposed COLA Revision

COLA Part 8 will be revised as described in the response.