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

Serial No. NA3-12-003R
Docket No. 52-017
COL/RGM

DOMINION VIRGINIA POWER
NORTH ANNA UNIT 3 COMBINED LICENSE APPLICATION
SRP 14.03.10: RESPONSE TO RAI LETTER 98

On March 30, 2012, 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 one question. The response to the following Request for Additional Information (RAI) Question is provided in Enclosure 1:

- RAI 6341, Question 14.03.10-4 ITAAC for Emergency Planning

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

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

Very truly yours,

Eugene S. Grecheck

D089
NRO

Enclosure:

1. Response to NRC RAI Letter No. 98, RAI 6341, Question 14.03.10-4.

Commitments made by this letter:

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

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 7th day of June, 2012
My registration number is 7173057 and my
Commission expires: August 31, 2012

Wanda K. Marshall
Notary Public

WANDA K. MARSHALL
Notary Public
Commonwealth of Virginia
7173057
My Commission Expires Aug 31, 2012

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 No. 98

RAI No. 6341, Question 14.03.10-4

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

North Anna Unit 3

Dominion

Docket No. 52-017

RAI NO.: 6341 (RAI LETTER NO. 98)

SRP SECTION: 14.03.10 – ITAAC FOR EMERGENCY PLANNING

QUESTIONS FOR Licensing and Inspection Branch (NSIR/DPR/LIB) (EP)

DATE OF RAI ISSUE: 03/30/2012

QUESTION NO.: 14.03.10-4

Part 10, Tier 1/ITAAC - COL application Part 10, "Tier 1/ITAAC" (Revision 4, December 2011), includes emergency planning (EP) ITAAC in Table B-1, "ITAAC for Emergency Planning." Please address the following related questions:

a. In ITAAC 1.1, Inspections, Tests, Analyses 1.1, and Acceptance Criteria 1.1.1 and 1.1.2, delete the reference to "Section 5". There is no Section 5 in Appendix 1, and the reference appears to be to COLA Part 5 (Emergency Plan). If the revisions are not appropriate, explain why.

b. In ITAAC Section 3.0 (Emergency Communications), the numbering for the second EP Program Element (page 10-47) appears incorrect, in that it should be "3.2", rather than "3.1", for the EP Program Element associated with NUREG-0654/FEMA-REP-1 evaluation criterion [F.1.f]. In addition, the related numbering under the columns entitled "Inspections, Tests, Analyses," and "Acceptance Criteria" should be "3.2.1" and "3.2.2", rather than "3.1.1" and "3.1.2". Either revise these numbers or explain why the revisions are not appropriate.

c. ITAAC 4.1 addresses the existing Emergency News Center (ENC). The acceptance criterion states that "[t]he Emergency News Center has space for a limited number of the news media." This acceptance criterion is unacceptable because the "limited number" is unspecified (i.e., it is not an objective criterion that an inspector can confirm is met). In addition, ITAAC 4.1 is unnecessary because the ENC currently exists and supports Units 1 and 2, consistent with the current site emergency plan. As such, an additional evaluation of the ENC's adequacy, as part of the Unit 3 licensing, is not required. Subsection I, "Areas of Review," of NUREG-0800 Section 13.3 states in part that "[i]n general, if an

application is for an additional reactor at an operating reactor site, and the application proposes to incorporate and extend elements of the existing emergency planning program to the new reactor (including by reference), those existing elements should be considered acceptable and adequate." Therefore, either delete all of ITAAC 4.0 in Table B-1 (renumbering the remaining ITAAC, as appropriate), or revise acceptance criterion 4.1 to replace "limited number" with the specific number of news media that the ENC has space for.

d. In ITAAC 5.1, change "operations support center" to "operational support center" - consistent with the Emergency Plan designation. In addition, (1) change "EP Element" to "EP Program Element" in ITAAC 5.1.1 (Inspections, Tests, Analyses column), and (2) change Acceptance Criteria number "5.1.1.2" to "5.1.2.2".

e. ITAAC 5.1 includes references to two US-APWR DCD Tier 1 tables (i.e., Tables 2.5.4-2 and 2.10-1). In contrast, the comparable ITAAC 8.1 of the Comanche Peak COL application (Part 10, Table B-1, Revision 2) identifies four tables (i.e., Tables 2.10-1, 2.7.5.4-3, 2.7.6.10-1, and 2.5.4-2). The staff reviewed the two extra tables (i.e., Tables 2.7.5.4-3 and 2.7.6.10-1), including the identified DCD design commitments (DCs), and believes that these are also relevant to North Anna ITAAC 5.1. Therefore, either revise ITAAC 5.1 to include bullets for "Table 2.7.5.4-3, DC #8" and Table 2.7.6.10-1, DCs #1, 2, 3," or explain why a revision is not appropriate.

f. In ITAAC 5.2, acceptance criterion 5.2.3 does not identify what data/parameters are available in the Emergency Operations Facility (EOF). Section H.2, "Emergency Operations Facility," of COL application Part 5 (Emergency Plan) states in part that "[d]isplay capability of the technical data system in the EOF includes a workstation that, at minimum, is capable of displaying the parameters that are required of an SPDS [Safety Parameter Display System]." In comparison, acceptance criterion 5.1.1 includes a bulleted reference to US-APWR DCD Tier 1 Table 2.5.4-2, Design Commitment (DC) #1, which references available (TSC) display variables for information systems important to safety. In NUREG-0800 Table 14.3.10-1 (Generic EP ITAAC), acceptance criterion 8.2.4 includes the bracketed statement: "[The COL applicant will identify specific capabilities.]" In addition, see NUREG-0696, Section 4.8, [EOF] "Technical Data and Data System." See also, Vogtle Unit 3 ITAAC (acceptance criterion) 5.2.2, which states: "The plant parameters listed in Table Annex V2 H-1, *Post Accident Monitoring Values*, can be retrieved and displayed in the EOF." Therefore, either revise ITAAC 5.2.3 to include the identification of appropriate data/parameters/variables that are available in the EOF - possibly, including a reference to DCD Table 2.5.4-2, DC #1 (if appropriate) - or explain why a revision is not appropriate.

g. In ITAAC Section 6.0 (Accident Assessment), change "EALs parameters" to "EAL parameters" in acceptance criterion 6.1.A.1. In addition, change "verify the availability of the following meteorological data is available:" to "verify the

availability of the following meteorological data:" in Inspections, Tests, Analyses column number 6.4. Also, delete the reference to "Section 5" in acceptance criterion 6.1 (first paragraph). There is no Section 5 in Appendix 1, and the reference appears to be to COLA Part 5 (Emergency Plan). If the revisions are not appropriate, explain why.

h. In ITAAC 8.1, acceptance criterion 8.1.1.C.1.a does not include the time it will take for the transition of command and control from the control room to the TSC. Section H.1, "On-Site Emergency Response Facilities," of COL application Part 5 (Emergency Plan) states in part that "[t]he TSC and OSC are provided to support emergency operations consistent with the guidance provided in NUREG-0737, Supplement 1." The TSC activation time is addressed NUREG-0737 (Supplement 1) Subsection 8.2.1.j, which states in part that [The TSC will be:] "[s]taffed by sufficient technical, engineering, and senior designated licensee officials to provide needed support, and be fully operational within approximately 1 hour after activation." See also, Vogtle Unit 3 ITAAC (acceptance criterion) 8.1.1.C.1.a, which states: "Command and control is demonstrated by the control room in the early phases of the emergency and the technical support center (TSC) within 60 minutes from TSC activation." Therefore, either revise North Anna ITAAC acceptance criterion 8.1.1.C.1.a to include the time it will take the TSC to demonstrate command and control, or explain why a revision is not appropriate.

Dominion Response

The issues and recommended changes related to COLA Part 10, Table B-1, "ITAAC for Emergency Planning," described in the RAI have been evaluated and will be addressed as follows:

a. The reference to "Section 5" of the Emergency Plan, Appendix 1 in ITAAC 1.1, Inspections, Tests, Analyses (ITA) 1.1, and Acceptance Criteria (AC) 1.1.1 and 1.1.2 will be deleted.

b. In ITAAC section 3.0 (Emergency Communications), the number of the second EP Program Element will be changed from 3.1 to 3.2. The associated ITA and AC numbers will also be changed to 3.2.1 and 3.2.2.

c. ITAAC 4.0 will be deleted in its entirety. To preserve the existing ITAAC numbering, the word "Deleted" will be added to reflect this change.

d. In ITAAC 5.1, the reference to the "operations support center" will be revised to "operational support center." ITA 5.1.1 will be revised to refer to "EP Program Element" instead of "EP Element" and AC number 5.1.1.2 will be changed to 5.1.2.2.

e. ITAAC 5.1 will be revised to include references to US-APWR DCD Table 2.7.5.4-3, Design Commitment (DC) No. 8 and Table 2.7.6.10-1 DC Nos. 1, 2 and 3.

f. In ITAAC 5.2, AC 5.2.3 will be revised to include a reference to the AC listed in US-APWR DCD Table 2.5.4-2, DC No. 1. COLA Part 10, Table B-1 ITAAC 6.4 defines the AC associated with the meteorological data.

g. In ITAAC 6.1, AC 6.1 will be revised to remove the reference to "Section 5" of the Emergency Plan Appendix 1, "and the reference to "EALs" in 6.1.A.1 will be revised to "EAL". In addition, the text of ITA 6.4 will be revised from "... verify the availability of the following meteorological data is available:" to "... verify the availability of the following meteorological data:"

h. In ITAAC 8.1, AC 8.1.1.C.1.a will be revised to clarify that command and control will be transitioned to the TSC after its activation. The time it will take for the transition of command and control from the control room to the TSC was not included in this revision, as it is already specified in ITAAC 8.1, AC 8.1.1.D.1.a.

Proposed COLA Revision

Table B-1 'ITAAC For Emergency Planning' item 1.0, 3.0, 4.0, 5.1, 6.1 and 8.1 will be revised as described above and on the attached markups.

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.

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
1.0 Emergency Classification System			
10 CFR 50.47(b)(4) – A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.	1.1 A standard emergency classification and emergency action level (EAL) scheme exists, and identifies facility system and effluent parameters constituting the bases for the classification scheme. [D.1**] [**D.1 corresponds to NUREG-0654 /FEMA-REP-1 evaluation criteria.] **ITAAC element addressed in:** COL EP II.D.1	1.1 An inspection of the control room, technical support center (TSC), and emergency operations facility (EOF) will be performed to verify that they have displays for retrieving facility system and effluent parameters that constitute the bases for the classification scheme in Appendix 1~~, Section 5,~~ of the NAPS Unit 3 COL Emergency Plan.	1.1.1 The specific parameters identified in Emergency Plan Appendix 1~~, Section 5~~ have been retrieved and displayed in the control room, TSC, and EOF. 1.1.2 The ranges available in the control room, TSC, and EOF encompass the values for the specific parameters identified in Emergency Plan Appendix 1~~, Section 5~~.

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
~~3.0 Emergency Communications~~			
~~10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.~~	~~3.1 The means exist for communications between the control room, TSC, EOF, principal State and local emergency operations centers (EOCs), and radiological field assessment teams. [F.1.d]~~ ~~NOTE: Tier 1 of US-APWR Design Control Document (DCD) addresses the control room and TSC portions of this EP Program Element in the following Design Commitments (DC):~~ ~~• Table 2.7.6.10-1, DC #2~~	~~3.1.1 NOTE: For communications between the control room, TSC, EOF, principal State and local emergency operations centers, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD) addresses the following Inspections, Tests, Analyses:~~ ~~• Table 2.7.6.10-1, Item #2~~	~~3.1.1 NOTE: For communications between the control room, TSC, EOF, principal State and local emergency operations centers, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD) addresses the following Acceptance Criteria:~~ ~~• Table 2.7.6.10-1, Item #2~~
		~~3.1.2 A test will be performed of the EOF communications capabilities.~~	~~3.1.2 Communications are established between the control room, TSC, EOF, principal State and local EOCs, and radiological field assessment teams.~~

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
3.0 Emergency Communications ~~(continued)~~			
10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.	3.1 The means exist for communications from the control room, TSC, and EOF to the NRC headquarters and regional office EOCs (including establishment of the Emergency Response Data System (ERDS) between the onsite computer system and the NRC Operations Center.) [F.1.f] NOTE: Tier 1 of the US-APWR Design Control Document (DCD) addresses the control room, TSC, and ERDS portions of this EP Program Element in the following Design Commitments (DC): • Table 2.7.6.10-1, DC #3	3.1.1 NOTE: For communications from the control room and TSC to the NRC headquarters and regional office EOCs (including establishment of the ERDS between the onsite computer system and the NRC Operations Center), Tier 1 of the US-APWR Design Control Document (DCD) addresses the following Inspections, Tests, Analyses: • Table 2.7.6.10-1, DC #3	3.1.1 NOTE: For communications from the control room and TSC to the NRC headquarters and regional office EOCs (including establishment of the ERDS between the onsite computer system and the NRC Operations Center), Tier 1 of the US-APWR Design Control Document (DCD) addresses the following Acceptance Criteria: • Table 2.7.6.10-1, DC #3
		3.1.2 A test will be performed of the EOF communications capabilities.	3.1.2 Communications are established from the EOF to the NRC headquarters and regional office EOCs.

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
3.0 Emergency Communications (continued)			
	3.2 The means exist for communications between the control room, TSC, EOF, principal State and local emergency operations centers (EOCs), and radiological field assessment teams. [F.1.d] NOTE: Tier 1 of US-APWR Design Control Document (DCD) addresses the control room and TSC portions of this EP Program Element in the following Design Commitments (DC): • Table 2.7.6.10-1, DC #2	3.2.1 NOTE: For communications between the control room, TSC, EOF, principal State and local emergency operations centers, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD) addresses the following Inspections, Tests, Analyses: • Table 2.7.6.10-1, Item #2	3.2.1 NOTE: For communications between the control room, TSC, EOF, principal State and local emergency operations centers, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD) addresses the following Acceptance Criteria: • Table 2.7.6.10-1, Item #2
		3.2.2 A test will be performed of the EOF communications capabilities.	3.2.2 Communications are established between the control room, TSC, EOF, principal State and local EOCs, and radiological field assessment teams.

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
4.0 Public Education and Information			
~~10 CFR 50.47(b)(7) Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.~~ [Deleted]	~~4.1 The licensee has provided space which may be used for a limited number of the news media at the EOF. [G.3.b]~~ ~~ITAAC element addressed in:~~ ~~COL EP-II.G.3.b~~ [Deleted]	~~4.1 An inspection of the Emergency News Center will be performed to verify that space is provided for a limited number of the news media.~~ ~~4.1~~ [Deleted]	~~4.1 The Emergency News Center has space for a limited number of the news media.~~ ~~4.1~~ [Deleted]

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
5.0 Emergency Facilities and Equipment			
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	5.1 The licensee has established a technical support center (TSC) and onsite ~~operations~~ operational support center (OSC). [H.1] NOTE: For the TSC, Tier 1 of the US-APWR Design Control Document (DCD) addresses this EP Program Element in the following Design Commitments (DC): • Table 2.5.4-2, DC #1 • Table 2.10-1, DC #1 • Table 2.7.5.4-3, DC#8 • Table 2.7.6.10-1, DCs#1, 2 and 3	5.1.1 NOTE: For the TSC, Tier 1 of the US-APWR Design Control Document (DCD) addresses this EP Program Element in the following Inspections, Tests, Analyses: • Table 2.5.4-2, DC #1 • Table 2.10-1, DC #1 • Table 2.7.5.4-3, DC#8 • Table 2.7.6.10-1, DCs#1, 2 and 3 5.1.2 An inspection of the as-built OSC will be performed.	5.1.1 NOTE: For the TSC, Tier 1 of the US-APWR Design Control Document (DCD) addresses this EP Program Element in the following Acceptance Criteria: • Table 2.5.4-2, DC #1 • Table 2.10-1, DC #1 • Table 2.7.5.4-3, DC#8 • Table 2.7.6.10-1, DCs#1, 2 and 3 5.1.2.1 The OSC is located onsite, separate from the control room and TSC.

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
5.0 Emergency Facilities and Equipment (continued)			
			5.1.2.2 ~~5.1.1.2~~ The following communications equipment is provided in the as-built OSC and voice transmission and reception have been accomplished: • Dedicated telephone to control room • Dedicated telephone to TSC • Plant page system (voice transmission only)

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
5.0 Emergency Facilities and Equipment (continued)			
	5.2 The licensee has established an emergency operations facility (EOF). [H.2] **ITAAC element addressed in:** COL EP II.H.2	5.2 An inspection and analysis of the EOF will be performed.	5.2.1 A report exists and concludes that the EOF has at least 243 square meters (2,625 square feet). 5.2.2 Voice transmission and reception have been accomplished between the EOF and TSC. 5.2.3 The EOF has the means to acquire, display and evaluate radiological, meteorological, and plant system data pertinent to determining offsite protective measures. This data is defined by the acceptance criteria in: • DCD Table 2.5.4-2 DC#1 • Table B-1 ITAAC 6.4

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
6.0 Accident Assessment			
10 CFR 50.47(b)(9) – Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.	6.1 The means exist to provide initial and continuing radiological assessment throughout the course of an accident. [I.2] **ITAAC element addressed in:** COL EP II.I.2, Appendix 2	6.1 A test of the emergency plan will be conducted by performing an exercise or drill to verify the capability to perform accident assessment.	6.1 An exercise or drill has been accomplished, including use of selected monitoring parameters identified in the EAL thresholds listed in the Emergency Plan Appendix 1~~, Section 5,~~ to assess simulated degraded plant conditions and initiate protective actions in accordance with the following criteria: A. Accident Assessment and Classification 1. Initiating conditions identified, ~~EALs~~ EAL parameters determined, and the emergency correctly classified throughout the drill. 2. Protective action recommendations developed and communicated to appropriate authorities.

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
6.0 Accident Assessment (continued)			
	6.4 The means exist to acquire and evaluate meteorological information. [I.5] **ITAAC element addressed in:** COL EP II.I.5	6.4 An inspection of the control room, TSC, and EOF will be performed to verify the availability of the following meteorological data ~~is available~~: • Wind speed (at 10 m and 48.4 m) • Wind direction (at 10 m and 48.4 m) • Ambient air temperature (at 10 m) • Differential air temperature (between 10 m and 48.4 m)	6.4 The following meteorological data is available in the control room, TSC, and EOF: • Wind speed (at 10 m and 48.4 m) • Wind direction (at 10 m and 48.4 m) • Ambient air temperature (at 10 m) • Differential air temperature (between 10 m and 48.4 m)

Table B-1 ITAAC For Emergency Planning

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
8.0 Exercises and Drills (continued)			
			8.1.1 (continued) C. Emergency Response 1. Demonstrate the capability to direct and control emergency operations. Standard Criteria: a. Command and control is demonstrated by the control room in the early phase of the emergency and the technical support center (TSC), after its activation. *(continued)*