

PMNorthAnna3COLPEmails Resource

From: Wanda.K.Marshall@dom.com
Sent: Monday, August 04, 2008 5:11 PM
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Subject: Response to Request for Additional Information Letter No. 013
Attachments: 080408 D ltr. Response to Request for Additional Information Letter No. 013.pdf
Importance: High

cc list:

Please see attached.

Wanda K. Marshall

Administrative Assistant III
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1069207

Options

Priority: High
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

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August 4, 2008

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

Serial No. NA3-08-066R
Docket No. 52-017
COL/BCB

DOMINION VIRGINIA POWER
NORTH ANNA UNIT 3 COMBINED LICENSE APPLICATION
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 013

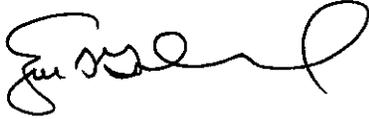
On June 24, 2008, the NRC requested additional information to support the review of certain portions of the North Anna Unit 3 Combined License Application (COLA). The responses to the following RAIs are provided in Enclosures 1 through 13:

- RAI Question 09.01.04-1 Qualifications for Fuel Handling Personnel
- RAI Question 09.01.04-2 Testing of Fuel Handling System Interlocks
- RAI Question 09.01.05-1 Size and Rating Requirements for Slings
- RAI Question 09.01.05-2 Heavy Load Equipment Outside Scope of DCD
- RAI Question 09.05.04-1 Procedures to Ensure Diesel Fuel Oil Supply
- RAI Question 09.05.04-2 Diesel Fuel Oil for Seven-Day Loaded Run
- RAI Question 17.5-1 Comparison of QAPD and SRP 17.5 Criteria
- RAI Question 17.5-2 Scope of Work for Each QAPD
- RAI Question 17.5-3 QAPD – Siting and Subsurface Investigations
- RAI Question 17.5-4 QAPD Organizational Charts
- RAI Question 17.5-5 Correct CFR Citation to 10 CFR 52.79(a)(27)
- RAI Question 17.5-6 Commitment to RG 1.37
- RAI Question 17.5-7 Making Changes to Organizational Description

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,



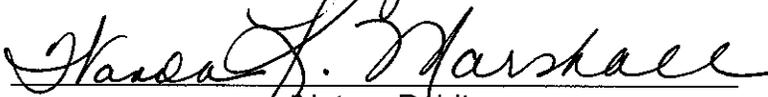
Eugene S. Grecheck

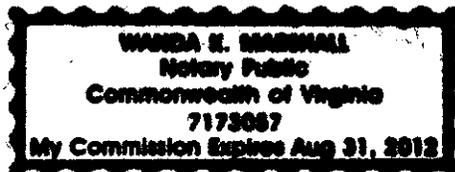
COMMONWEALTH OF VIRGINIA

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 4th day of August, 2008
My registration number is 7173057 and my
Commission expires: August 31, 2012


Notary Public



Enclosures:

1. Response to NRC RAI Letter No. 013, RAI Question No. 09.01.04-1
2. Response to NRC RAI Letter No. 013, RAI Question No. 09.01.04-2
3. Response to NRC RAI Letter No. 013, RAI Question No. 09.01.05-1
4. Response to NRC RAI Letter No. 013, RAI Question No. 09.01.05-2
5. Response to NRC RAI Letter No. 013, RAI Question No. 09.05.04-1
6. Response to NRC RAI Letter No. 013, RAI Question No. 09.05.04-2
7. Response to NRC RAI Letter No. 013, RAI Question No. 17.5-1
8. Response to NRC RAI Letter No. 013, RAI Question No. 17.5-2
9. Response to NRC RAI Letter No. 013, RAI Question No. 17.5-3
10. Response to NRC RAI Letter No. 013, RAI Question No. 17.5-4
11. Response to NRC RAI Letter No. 013, RAI Question No. 17.5-5
12. Response to NRC RAI Letter No. 013, RAI Question No. 17.5-6
13. Response to NRC RAI Letter No. 013, RAI Question No. 17.5-7

Commitments made by this letter:

1. The information provided in the RAI responses will be incorporated into a future submission of the North Anna Unit 3 COLA, as described in the Enclosures.
2. Dominion will develop and/or revise the programs and procedures to support the implementation of the QAPD described in FSAR Appendix 17BB by June 30, 2009.
3. Organization charts depicting the organizational interfaces for North Anna Unit 3 (NAPS3) are being developed and will be added to the QAPD. These charts will be provided with the response to RAI Letter No. 21, which also requests additional information regarding the NAPS3 organization.

cc: U. S. Nuclear Regulatory Commission, Region II
T. A. Kevern, NRC
J. T. Reece, NRC
J. J. Debiec, ODEC
G. A. Zinke, NuStart/Entergy
T. L. Williamson, Entergy
R. Kingston, GEH
K. Ainger, Exelon
P. Smith, DTE

ENCLOSURE 1

Response to NRC RAI Letter No. 013

RAI Question No. 9.01.04-1

NRC RAI 9.01.04-1

ESBWR DCD COL Information Item 9.1.6-4-A "Fuel Handling Operations" tasks the COL applicant to describe the program that addresses personnel qualifications, training, and control programs for fuel handling personnel. FSAR Section 9.1.4.13, STD COL 9.1.6-4-A, states that personnel qualifications and training for fuel handlers are addressed in FSAR Section 13.2. Staff review of Section 13.2 did not identify reference to personnel qualification and training for fuel handlers. Please clarify and describe the program that addresses personnel qualifications, training, and control programs for fuel handling personnel.

Dominion Response

FSAR Section 9.1.4.13 states that personnel qualifications and training for fuel handlers are addressed in FSAR 13.2. FSAR Section 13.2 refers to Appendix 13BB for a description of the training program. FSAR Appendix 13BB incorporates by reference NEI 06-13A, *Template for an Industry Training Program Description*. The NRC issued a Safety Evaluation Report on this template, dated September 5, 2007.

NEI 06-13A addresses fuel handlers and states, in part:

"For reactor operators, senior reactor operators, fuel handlers, fire protection personnel, and positions specified in 10 CFR 50.120 (Reference 13.2-4), programs are developed, established, implemented and maintained using a systems (or systematic) approach to training (SAT) as defined by 10 CFR 55.4 (Reference 13.2-8) and ANSI/ANS-3.1-1993 (Reference 13.2-14), as endorsed by Regulatory Guide-1.8 (Reference 13.2-16)."

As stated in the template, the training and qualification program for fuel handlers will be developed using a systems approach to training as defined by the referenced regulations and guidance documents.

As discussed in FSAR Section 9.1.4.13, the control of fuel handlers and fuel handling operations is addressed in plant operating procedures. These procedures are addressed in FSAR Section 13.5.2.1.

Proposed COLA Revision

None.

ENCLOSURE 2

Response to NRC RAI Letter No. 013

RAI Question No. 9.01.04-2

NRC RAI 9.01.04-2

ESBWR DCD COL Information Item 9.1.6-4-A "Fuel Handling Operations" tasks the COL applicant to describe the program that addresses equipment inspection and test plans for equipment used to move fuel. FSAR Section 9.1.4.19, STD COL 9.1.6-4-A, states: "As part of normal plant operations, the fuel handling equipment is inspected for operating conditions before each refueling operation. During the operational testing of this equipment, procedures are followed that will affirm the correct performance of the fuel handling system interlocks. Other maintenance and test procedures are developed based on manufacturer's requirement." Staff review identified that the information is incomplete regarding description of the program elements for testing and inspection needed before each refueling operation to ensure that safety features and interlocks perform satisfactorily. Such safety features and interlocks are to prevent excessive personnel radiation exposure and fuel damage consistent with General Design Criteria 61. Please clarify and describe the program elements that ensure interlocks and safety features necessary for avoidance of excessive personnel radiation exposure and fuel damage are performed before each refueling operation.

Dominion Response

FSAR Section 9.1 incorporates by reference DCD Section 9.1.4.5, which describes the interlocks on the refueling and fuel handling machines, including:

- Prevent hoisting a fuel assembly over the vessel with a control rod removed;
- Prevent collision with fuel pool walls or other structures;
- Limit travel of the fuel grapple;
- Interlock grapple hook engagement with hoist load and hoist up power; and
- Ensure correct sequencing of the transfer operation in the automatic or manual mode.

FSAR Section 9.1.4.13 requires the development of fuel handling procedures that address the status of plant systems required for fuel handling, including the interlocks described in DCD Section 9.1.4.5. These detailed operating procedures will be developed as described in FSAR Section 13.5.

In addition to the procedural controls discussed above, requirements for testing and inspecting refueling equipment safety features and interlocks are addressed in the DCD Technical Specifications (TS), which are incorporated by reference in the COLA. These TS are part of the ESBWR standard plant design and ensure

compliance with GDC 61. For example, the following TS are included in the COLA:

- TS 3.9.1, Refueling Equipment Interlocks, ensures refueling equipment interlocks can restrict the operation of the refueling equipment or the withdrawal of control rods to reinforce plant procedures in preventing the reactor from achieving criticality during refueling. The refueling interlock circuitry senses the conditions of the refueling equipment and the control rods. The refueling interlocks prevent operation of the refueling equipment with fuel loaded over the core whenever any control rod is withdrawn, or to prevent control rod withdrawal whenever fuel-loaded refueling equipment is over the core. This Technical Specification requires surveillance tests (Channel Functional Tests) on the following refueling equipment interlock inputs:
 - All-rods-in;
 - Refueling machine position;
 - Refueling machine fuel grapple hoist, fuel-loaded; and
 - Refueling machine auxiliary hoist, fuel-loaded.
- TS 3.9.2, Refuel Position One-Rod/Rod-Pair-Out Interlock, restricts the movement of control rods to reinforce plant procedures that prevent the reactor from becoming critical during refueling operations.
- TS 3.9.6, Reactor Pressure Vessel (RPV) Water Level, requires a minimum water level of 7.01 m (23.0 ft) above the top of the RPV flange before the movement of irradiated fuel assemblies within the RPV. During refueling, this maintains a sufficient water level above the RPV to retain iodine fission product activity in the water in the event of a fuel handling accident.

Each of these TS has required surveillances that must be performed at specified intervals.

Proposed COLA Revision

None.

ENCLOSURE 3

Response to NRC RAI Letter No. 013

RAI Question No. 9.01.05-1

NRC RAI 9.01.05-1

FSAR Section 9.1.5.6 "Other Overhead Load Handling System" includes two new sections identified as "Special Lifting Devices" and "Other lifting Devices." These sections were added as part of the applicant's resolution of STD COL 9.1.6.5-A. The applicant identified ANSI N14.6, "Special Lifting Devices for Shipping Containers Weighing 10000 Pounds (4500 kg) or More" as the design and construction document used for any special lifting devices but identified several exceptions to the testing and inspection portions of the document. Specifically, the applicant proposed visual inspection of major load-carrying welds with an acceptance criteria of no cracks. However, the staff notes that Section 6.3.1.b of ANSI N14.6, requires dimensional testing, visual inspection, and nondestructive testing in accordance with ASME Boiler and Pressure Vessel Code, Section III. The applicant also proposed changes for inspection and testing requirements for the Dryer/Separator Strongback. Although the applicant referenced ANSI N14.6 as the governing document, the staff was unable to find the requirement to perform NDE of load bearing welds on this device every five refuelings. In lieu of NDE inspections every five refuelings, the applicant proposed to perform visual and dimensional examinations of load bearing welds prior to the initial lift each outage. In the section identified as "Other Lifting Devices," which includes slings, the applicant took exception to the size and rating requirements identified in ASME B30.9, "Slings." The specific requirement is actually in NUREG 0612, "Control of Heavy Loads at Nuclear Power Plants," Section 5.1.1.5, which states, "in selecting the proper sling, the load used should be the sum of the static and maximum dynamic load." The applicant proposes to use only the static load for sizing of slings for heavy load lifts. SRP 9.1.5, Section III.4.c.ii.(1) states that special lifting devices should satisfy ANSI N14.6.

Please provide the following:

- (a) Additional information to justify the change in inspection requirements for major load carrying welds on special lifting devices.*
- (b) Additional information to justify the proposed inspection and testing for the Dryer/Separator Strongback.*
- (c) Additional information to justify the adequacy of using only the static load for sizing of slings used for heavy loads.*

Dominion Response

The FSAR will be revised to delete the exceptions noted in the RAI.

Proposed COLA Revision

FSAR Section 9.1.5.6 will be revised to incorporate the following changes/requirements:

- Testing and inspection of special lifting devices follow the guidelines of ANSI N14.6.
- Slings used for heavy load lifts meet the requirements specified for slings in ANSI B30.9 and the guidance specified in NUREG-0612, Section 5.1.1(5).
- Change COL Information Item number from STD COL 9.1.6-5-A to STD COL 9.1-5-A, consistent with DCD Revision 5.

These changes are shown on the attached FSAR 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 ESBWR 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.

9.1.5 Overhead Heavy Load Handling Systems (OHLHS)

9.1.5.6 Other Overhead Load Handling System

Add the following at the end of this section.

~~STD COL 9.1.6-5-A~~
STD COL 9.1-5-A

Special Lifting Devices

~~For special lifting devices, the guidelines of ANSI N14.6 are implemented as specified with the following exceptions/clarifications:~~

- ~~• The acceptance criteria of paragraph 5.5.2 are applied to fabrication and repair welds only.~~
- ~~• The acceptance criteria for inservice inspection shall be limited to "No Cracks."~~
- ~~• The use of later editions of ASME Section V may be used to permit the use of advanced NDE technology.~~
- ~~• For the Dryer/Separator Strongback the requirement to routinely examine the load bearing welds every fifth refueling outage by nondestructive examination (NDE) (Magnetic Particle or Liquid Penetrant) will not be used. The lifting device shall be examined visually and dimensionally. The visual and dimensional examination shall be performed prior to the initial lift each outage. Any cracks in the coating or dimension out of tolerance shall require magnetic particle or liquid penetrant examination of the suspect welds and/or additional welds as required by Design Engineering.~~

Testing and inspection of special lifting devices follow the guidelines of ANSI N14.6.

Other Lifting Devices

~~Slings used for heavy load lifts meet the requirements specified for slings in ANSI B30.9 with the following clarification. Since dynamic loads constitute a small percentage of the total load imposed on slings, the sling's ratings are expressed in terms of maximum static load only. and the guidance specified in NUREG-0612, Section 5.1.1(5).~~

ENCLOSURE 4

Response to NRC RAI Letter No. 013

RAI Question No. 9.01.05-2

NRC RAI 9.01.05-2

ESBWR DCD COL Information Item 9.1.6-5-A tasks the applicant to provide a description of heavy load handling equipment outside the scope of the certified design and, additionally, a description of automatic and manual interlocks not described in the certified design. FSAR Section 9.1.5 provides information related to STD COL 9.1.6-5-A but does not identify heavy load handling equipment outside the scope of the certified design or describe interlocks not described in the certified design. Please clarify and, as necessary, provide additional information related to the handling equipment and interlocks.

Dominion Response

Heavy loads as defined by NUREG-0612 are “any load, carried in a given area after a plant becomes operational, that weighs more than the combined weight of a single spent fuel assembly and its associated handling tool for the specific plant in question.” The concern addressed by NUREG-0612 is that, depending on the plant area, if heavy loads were to drop, they could potentially impact stored spent fuel, fuel in the core, or equipment that may be required to achieve safe shutdown or permit continued decay heat removal. If sufficient stored spent fuel or fuel in the core were damaged, the potential releases of radioactive material could result in offsite doses that exceed 10 CFR Part 100 limits. If the impact damaged equipment associated with redundant or dual safe shutdown paths, the capability to achieve safe shutdown may be defeated.

For North Anna Unit 3, there is no safety-related equipment or safe shutdown equipment that is outside the scope of the ESBWR certified design. Therefore, there are no heavy loads as defined by NUREG-0612 that are outside the scope of the certified design. The site-specific design does not include any heavy load handling equipment, nor are there any interlocks associated with heavy load handling equipment outside the scope of the certified design.

The FSAR will be revised to clarify this point. The associated COL Information Item number will also be revised to reflect a numbering change that occurred in DCD Revision 5.

Proposed COLA Revision

FSAR Section 9.1.5.9 will be revised to:

- Include a statement that there is no heavy load handling equipment, nor interlocks associated with heavy load handling equipment, that is outside the scope of the certified design.

- Change COL Information Item number from STD COL 9.1.6-5-A to STD COL 9.1-5-A, to be consistent with DCD Revision 5.

These changes are shown on the attached FSAR 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 ESBWR 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.

- Defined safe load paths will follow, to the extent practical, structural floor members.
- When heavy loads movement is restricted by design or operational limitation, no safe load path is required.
- Supervision is present during heavy load lifts to enforce procedural requirements.

Inspection and Testing

Cranes addressed in this section are inspected, tested, and maintained in accordance with Section 2-2 of ANSI B30.2, Section 11.2 of ANSI B30.11, or Sections 16-1.2.1 and 16-1.2.3 of ANSI B30.16 with the exception that tests and inspections may be performed prior to use for infrequently used cranes. Prior to making a heavy load lift, an inspection of the crane is made in accordance with the above applicable standards.

Training and Qualification

Training and qualification of operators of cranes addressed in this section meet the requirements of ANSI B30.2, and include the following:

- Knowledge testing of the crane to be operated in accordance with the applicable ANSI crane standard.
- Practical testing for the type of crane to be operated.
- Supervisor signatory authority on the practical operating examination.
- Applicable physical requirements for crane operators as defined in the applicable crane standard.

Quality Assurance

Procedures for control of heavy loads are developed in accordance with Section 13.5. In accordance with Section 17.5, other specific quality program controls are applied to the heavy loads handling program, targeted at those characteristics or critical attributes that render the equipment a significant contributor to plant safety.

9.1.5.9 Safety Evaluations

Add the following at the end of this section.

~~STD COL 9.1.6.5-A~~
STD COL 9.1-5-A

No heavy loads are identified that are outside the scope of the certified design. In addition, there is no heavy load handling equipment, nor interlocks associated with heavy load handling equipment, outside the scope of the certified design.

9.1.6 COL Information

9.1.6-4-A Fuel Handling Operations

STD COL 9.1.6-4-A

This COL item is addressed in Section 9.1.4.13 and Section 9.1.4.19.

9.1-5-A ~~9.1.6-5-A~~ Handling of Heavy Loads

~~STD COL 9.1.6-5-A~~
STD COL 9.1-5-A

This COL item is addressed in Section 9.1.5.6, Section 9.1.5.8, and Section 9.1.5.9.

9.2 Water Systems

9.2.1 Plant Service Water System

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

9.2.1.2 System Description

Replace the Summary Description, Detailed System Description, and Operation portions of this section with the following.

NAPS CDI

Summary Description

The PSWS rejects heat from nonsafety-related RCCWS and Turbine Component Cooling Water System (TCCWS) heat exchangers to the environment. The source of cooling water to the PSWS is from the auxiliary heat sink (AHS), while the heat removed is rejected to the AHS. Unit 3 utilizes mechanical draft plume abated cooling towers for the AHS.

A simplified diagram of the PSWS is shown in Figure 9.2-201.

Detailed System Description

The PSWS consists of two independent and 100 percent redundant trains that continuously circulate water through the RCCWS and TCCWS heat exchangers.

Each PSWS train consists of two 50 percent capacity vertical pumps taking suction in parallel from the plant service water basin. Discharge is through a check valve, a self-cleaning duplex strainer, and a motor-operated discharge valve at each pump to a common header. Each common header supplies plant service water to each RCCWS and TCCWS heat exchanger train arranged in parallel. The plant service water is returned via a common header to the mechanical draft plume abated cooling tower (AHS) in each train. Remotely-operated isolation valves and a cross-tie line permit routing of the plant service water to

ENCLOSURE 5

Response to NRC RAI Letter No. 013

RAI Question No. 9.05.04-1

NRC RAI 9.05.04-1

FSAR Section 9.5.4 STD COL 9.5.4-1-A states that "procedures ensure sufficient diesel fuel oil inventory is available on site so that the diesel can operate continually for seven days. These procedures will be developed in accordance with the milestones and processes described in Section 13.5." The staff review of FSAR Section 13.5 identified no mention of the procedures to ensure a seven day supply of diesel fuel oil. Please clarify how the aforementioned procedure will be developed in accordance with the milestones and processes described in Section 13.5.

Dominion Response

FSAR Section 13.5 does not specifically list or discuss all operating procedures for the plant, but rather provides guidance and milestones for their development. As stated in STD COL 9.5.4-1-A, the procedure that provides information about diesel fuel oil inventory will be developed using the processes described in Section 13.5.

FSAR Section 13.5 incorporates by reference DCD Section 13.5.2, which states that plant operating procedures shall include, as necessary, the elements described in American National Standards Institute (ANSI)/American Nuclear Society (ANS)-3.2-1994; R1999.

Proposed COLA Revision

None.

ENCLOSURE 6

Response to NRC RAI Letter No. 013

RAI Question No. 9.05.04-2

NRC RAI 9.05.04-2

FSAR Section 9.5.4 STD COL 9.5.4-1-A refers to procedures to ensure that the Diesel Generator can operate continually for seven days. However, the FSAR does not specify the loading of the Diesel Generator during the seven days. Please verify that sufficient inventory is available on site so that the diesels can operate at continuous maximum rating for seven days.

Dominion Response

The procedures referred to in STD COL 9.5.4-1-A for verifying the diesel generator fuel oil inventory are based on the required inventory for each associated diesel generator for seven days of continual operation while supplying design loads associated with each diesel generator.

Load profiles will be used to calculate the fuel consumption rate required for both the standby diesel generators and the ancillary diesel generators. These consumption rates (with appropriate margins for usable fuel in the tank, instrument uncertainty, and load growth) will be converted into minimum inventory requirements that will be maintained in the referenced procedures.

Proposed COLA Revision

FSAR Section 9.5.4.2, STD COL 9.5.4-1-A will be revised to clarify that the standby and ancillary diesel generators can operate continually for seven days with each operating at its calculated design load, with appropriate design margins. This change is shown on the attached FSAR 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 ESBWR 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.

9.5.2.5 **COL Information**

NAPS
COL 9.5.2.5-1-A

9.5.2.5-1-A **Offsite Interfaces**

This COL item is addressed in Section 9.5.2.2.

NAPS
COL 9.5.2.5-2-A

9.5.2.5-2-A **Grid Transmission Operator**

This COL item is addressed in Section 9.5.2.2.

9.5.3 **Lighting System**

This section of the referenced DCD is incorporated by reference with no departures or supplements.

9.5.4 **Diesel Generator Fuel Oil Storage and Transfer System**

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

9.5.4.2 **System Description**

Detailed System Description

Standby Diesel Generators

STD COL 9.5.4-1-A

Replace the third to last sentence in the first paragraph with the following.

Procedures require that the quantity of DG fuel oil in the standby DG fuel oil storage tanks is monitored on a periodic basis. The diesel fuel oil usage is tracked against planned deliveries. Regular transport replenishes the fuel oil inventory during periods of high demand and ensures continued supply in the event of adverse weather conditions. These procedures ensure sufficient diesel fuel oil inventory is available on site so that the standby DGs can operate continually for seven days with each operating at its calculated design load, with appropriate design margins. The procedures will be developed in accordance with the milestone and processes described in Section 13.5.

NAPS COL 9.5.4-2-A

Replace the third paragraph with the following.

The material for the underground piping portion of the fuel oil transfer system is carbon steel. A corrosion protection system is provided for internal and external surfaces of piping systems. The buried section of the piping is provided with waterproof protected coating and an impressed current type cathodic protection to control external corrosion.

STD COL 9.5.4-1-A Delete the parenthetical "(COL 9.5.4-1-A)" at the end of the last paragraph.

Ancillary Diesel Generators

Replace the third to last sentence in the first paragraph with the following.

STD COL 9.5.4-1-A Procedures require that the quantity of DG fuel in the ancillary DG fuel oil storage tanks is monitored on a periodic basis. The diesel fuel oil usage is tracked against planned deliveries. Regular transport replenishes the fuel oil inventory during periods of high demand and ensures continued supply in the event of adverse weather conditions. These procedures ensure sufficient diesel fuel oil inventory is available on site so that the ancillary DGs can operate continually for seven days with each operating at its calculated design load, with appropriate design margins. The procedures will be developed in accordance with the milestone and processes described in Section 13.5.

System Operation

Standby Diesel Generators

STD COL 9.5.4-1-A Delete the parenthetical "(COL 9.5.4-1-A)" at the end of the paragraph.

Ancillary Diesel Generators

STD COL 9.5.4-1-A Delete the parenthetical "(COL 9.5.4-1-A)" at the end of the paragraph.

9.5.4.6 COL Unit-Specific Information

9.5.4-1-A Fuel Oil Capacity

STD COL 9.5.4-1-A This COL item is addressed in Section 9.5.4.2.

9.5.4-2-A Protection of Underground Piping

NAPS COL 9.5.4-2-A This COL item is addressed in Section 9.5.4.2.

9.5.5 Diesel Generator Combustion Air Intake and Exhaust System

This section of the referenced DCD is incorporated by reference with no departures or supplements.

ENCLOSURE 7

Response to NRC RAI Letter No. 013

RAI Question No. 17.5-1

NRC RAI 17.5-1

Pursuant to 10 CFR 52.79(a)(41), COL applicants must provide an evaluation of the facility against the Standard Review Plan (SRP) revision in effect 6 months before the docket date of the application and, where differences exist, the evaluation must discuss how the proposed alternative provides an acceptable method of complying with the Commission’s regulations, or portions thereof, that underlie the corresponding SRP acceptance criteria. Regulatory Guide (RG) 1.206, Section C.I.17.5.3, states that applicants may use an existing Quality Assurance Program Description (QAPD) that the NRC has approved for current use for either or both phases of its QAPD submittal, provided that the applicant identifies and justifies alternatives to, or differences from, the SRP in effect 6 months prior to the docket date of the application. FSAR Section 17.5 states that the existing Dominion Nuclear Facility QAPD (DOM-QA-1) is used for safety-related activities performed prior to the start of construction (e.g., site investigation, design and safety analysis, early procurements). Please provide the evaluation of the existing Dominion Nuclear Facility QAPD against the acceptance criteria in SRP 17.5.

Dominion Response

DOM-QA-1, “Dominion Nuclear Facility Quality Assurance Program Description,” was evaluated with respect to SRP Section 17.5 acceptance criteria. The results of the review are summarized in the following table.

Specific Acceptance Criteria	Evaluation
II.A, II.B.1, II.B.2, II.B.3, II.B.4, II.B.5, II.B.6, II.B.7, II.C, II.D, II.E, II.F.1, II.F.2, II.F.3, II.F.4, II.F.5, II.F.6, II.F.7, II.F.9, II.F.12, II.G, II.H, II.I, II.J, II.K, II.L.1, II.L.2, II.L.3, II.L.4, II.L.5, II.L.6, II.L.7, II.M.1, II.M.2, II.M.3, II.M.4, II.M.5, II.N, II.O, II.P, II.Q, II.R.1, II.R.2, II.R.3.a, II.R.3.c, II.R.4, II.R.5, II.R.6, II.R.7, II.R.8, II.R.9, II.R.10, II.R.11, II.R.12, II.S, II.T, II.U.1.a, II.U.1.b, II.U.1.c, II.U.1.d, II.U.2.a, II.U.2.b, II.U.2.c, II.U.2.d, II.U.2.e, II.U.2.f, II.U.2.g, II.U.2.h, II.U.2.i, II.U.2.j, II.U.2.I, II.V	Conforms.
II.B.8	Alternative language addresses the grace period (previously approved by NRC).

Specific Acceptance Criteria	Evaluation
II.B.9, II.F.8, II.F.10, II.F.11, II.M.6, II.M.7, II.M.8, II.R.3.b, II.W	Not applicable. DOM-QA-1 is not used during the operational phase.
II.L.8	Not applicable. This process for qualification of commercial-grade calibration services is not used.
II.U.1.e	Not a commitment in DOM-QA-1. Included in implementing procedure.
II.U.2.k	Not applicable. On-line records not used.

Proposed COLA Revision

FSAR Table 1.9-201 will be revised to include a summary of how DOM-QA-1 conforms to SRP Section 17.5. This change is shown on the attached FSAR 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 ESBWR 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.

NAPS COL 1.9-3-A Table 1.9-201 Conformance with Standard Review Plan

SRP Section	Title	Rev	Date	Specific Acceptance Criteria	Evaluation
17.5	Quality Assurance Program Description - Design Certification, Early Site Permit and New License Applicants	Initial Issuance	Mar-07	<u>II.A, II.B.1, II.B.2, II.B.3, II.B.4, II.B.5, II.B.6, II.B.7, II.C, II.D, II.E, II.F.1, II.F.2, II.F.3, II.F.4, II.F.5, II.F.6, II.F.7, II.F.9, II.F.12, II.G, II.H, II.I, II.J, II.K, II.L.1, II.L.2, II.L.3, II.L.4, II.L.5, II.L.6, II.L.7, II.M.1, II.M.2, II.M.3, II.M.4, II.M.5, II.N, II.O, II.P, II.Q, II.R.1, II.R.2, II.R.3.a, II.R.3.c, II.R.4, II.R.5, II.R.6, II.R.7, II.R.8, II.R.9, II.R.10, II.R.11, II.R.12, II.S, II.T, II.U.1.a, II.U.1.b, II.U.1.c, II.U.1.d, II.U.2.a, II.U.2.b, II.U.2.c, II.U.2.d, II.U.2.e, II.U.2.f, II.U.2.g, II.U.2.h, II.U.2.i, II.U.2.j, II.U.2.l, II.V</u>	<u>DOM-QA-1: Conforms</u>
				<u>II.B.8</u>	<u>DOM-QA-1: Alternative language addresses the grace period (previously approved by NRC).</u>
				<u>II.B.9, II.F.8, II.F.10, II.F.11, II.M.6, II.M.7, II.M.8, II.R.3.b, II.W</u>	<u>DOM-QA-1: Not applicable.</u> <u>DOM-QA-1 is not used during the operational phase.</u>
				<u>II.L.8</u>	<u>DOM-QA-1: Not applicable.</u> <u>This process for qualification of commercial-grade calibration services is not used.</u>
				<u>II.U.1.e</u>	<u>DOM-QA-1: Not a commitment in implementing procedure.</u>
				<u>II.U.2.k</u>	<u>DOM-QA-1: Not applicable.</u> <u>On-line records not used.</u>

Table 1.9-201 Conformance with Standard Review Plan

SRP Section	Title	Rev	Date	Specific Acceptance Criteria	Evaluation
17.5 (continued)	Quality Assurance Program Description - Design Certification, Early Site Permit and New License Applicants	Initial Issuance	Mar-07	II.A, II.B, II.C, II.D., II.E, II.F, II.G, II.H, II.I, II.J, II.K, II.L, II.M, II.N, II.O, II.P, II.Q, II.R, II.S, II.T, II.U, II.V, II.W Option 1 II.W Option II	Conforms Dominion Quality Assurance Policy and QAPD: Not applicable for North Anna. Option I chosen Conforms
17.6	Maintenance Rule	Initial Issuance	Mar-07	II.1, II.2	Conforms
18	Human Factors Engineering	Rev. 2	Mar-07	II.A II.B, II.C	Conforms Not applicable. These acceptance criteria apply to changes to existing plants.
19.0	Probabilistic Risk Assessment and Severe Accident Evaluation for New Reactors	Rev. 2	Jun-07	II.1, II.2, II.3, II.4, II.5, II.6, II.7 II.8, II.9	Conforms Not applicable. Only applies to Westinghouse AP 600 design.
19.1	Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities	Rev. 2	Jun-07		Not applicable. There are no plans for risk-informed activities.

ENCLOSURE 8

Response to NRC RAI Letter No. 013

RAI Question No. 17.5-2

NRC RAI 17.5-2

FSAR Section 17.5 states, in part, that the existing Dominion Nuclear Facility QAPD (DOM-QA-1) is used for safety-related activities performed prior to the start of construction (e.g., site investigation, design and safety analysis, early procurements). In addition, FSAR Section 17.5 states that the QAPD described in FSAR Appendix 17BB will be applied during activities to adapt the design to specific plant implementation, construction, and operations. Please clarify the expected scope of work for each QAPD related to design and procurement activities from the time of docketing until the time the COLA might be issued. In particular, please identify when and where these design and procurement activities would take place, and specifically under which QAPD the activities will be conducted. In addition to supporting the staff's review of the COLA, this information will be used to support the planned inspection of the implementation of the Dominion QAPD consistent with the guidance of Inspection Manual Chapter 2502, "Pre-Combined License (Pre-COLA) Phase."

Dominion Response

DOM-QA-1 is currently being used to assure the quality of activities being conducted for North Anna Power Station Unit 3 (NAPS3). The current scope of activities includes:

- Design activities associated with Dominion's support of NRC's review of the COLA. Dominion employs the services of GEH at Wilmington, NC, and Bechtel at Frederick, MD.
- Design activities associated with the preparation of the site for construction of the power plant and supporting structures. Dominion employs the services of Bechtel at Frederick, MD.
- Procurement of items and services. Dominion has purchasing agreements with Bechtel at Frederick, MD, for design work, and GEH at Wilmington, NC, for the manufacturing and fabrication of the reactor pressure vessel (RPV).
- Dominion provides QA oversight of the services provided and the manufacturing of the RPV.

Dominion will develop and/or revise the programs and procedures to support the implementation of the NAPS3 QAPD described in FSAR Appendix 17BB by June 30, 2009. The scope of the activities conducted under this QAPD includes the completion of the design activities described above, completion of the manufacturing and fabrication of the RPV, and the remaining design, construction, installation, testing, and operational activities, as described in FSAR Appendix 17BB.

Proposed COLA Revision

None

ENCLOSURE 9

Response to NRC RAI Letter No. 013

RAI Question No. 17.5-3

NRC RAI 17.5-3

FSAR Section 17.5 indicates that the North Anna Power Station Unit 3 QAPD (FSAR Appendix 17BB) would become effective at commencement of construction and Part I, Section 1.1, of the QAPD lists the activities affecting quality to which the QAPD applies. Although this list is not all-inclusive, siting is listed as an activity affecting quality to which the QAPD applies.

Please provide the following:

- (a) Clarify how siting activities would be subject to this QAPD.*
- (b) If siting activities are not subject to this QAPD, please update Part I, Section 1.1 and Part II, Section 2, "Quality Assurance Program," including Section 2.3, of the North Anna Power Station Unit 3 QAPD accordingly.*
- (c) Explain the commitment to NQA-1-1994 Subpart 2.20, "Quality Assurance Requirements for Subsurface Investigations for Nuclear power Plants," in Section 3.5 of the North Anna Power Station Unit 3 QAPD.*

Dominion Response

As used in the QAPD, siting does not refer to plant site selection and or demonstration of site suitability that were completed in the North Anna Early Site Permit proceeding. Rather, as used in the QAPD, siting refers to any additional collection of data on the site that may be required during construction (such as subsurface measurements during excavation) and other site-related analyses or engineering that may be required to support the construction of certain SSCs at specific locations on the plant site. These additional activities are included within the scope of FSAR Appendix 17BB, "North Anna Power Station Unit 3 Quality Assurance Program Description," as a part of final design and construction.

FSAR Section 17.5 states that the QA applied to safety-related activities performed prior to the start of construction, including site investigation, is described in DOM-QA-1, "Dominion Nuclear Facility Quality Assurance Program Description." Section 17.5 also states that the QA applied to activities to adapt the design to specific plant implementation, construction, and operations is addressed in FSAR Appendix 17BB.

The reference to siting activities in FSAR Appendix 17BB includes any additional design work or measurements necessary to support construction of the ESBWR certified design on the North Anna site. As a part of that design work, additional site-related activities (e.g., locating structures and large components) may be required, including additional subsurface measurements. To support these types of activities, the QAPD includes measures to ensure the quality of work performed in investigating the subsurface conditions and the final location of

structures and components. These measures include a commitment to comply with NQA-1-1994, Basic Requirement 3 Supplement 3S-1, Basic Requirement 11 Supplement 11S-1, and the subsurface investigations requirements contained in Subpart 2.20.

Proposed COLA Revision

None.

ENCLOSURE 10

Response to NRC RAI Letter No. 013

RAI Question No. 17.5-4

NRC RAI 17.5-4

North Anna Power Station Unit 3 Quality Assurance Program Description (FSAR Appendix 17BB). SRP Section 17.5 Section A, "Organization," indicates that the applicant's QAPD should contain an organizational description that addresses the organizational structure, functional responsibilities, levels of authority, and interfaces. The organizational description is to include the onsite and offsite organizational elements that function under the cognizance of the QA program. The NRC endorsed the Nuclear Energy Institute (NEI) QAPD template (NEI 06-14, "Template for an Industry Quality Program Description") as a method for providing a QAPD that meets the requirements of 10 CFR Part 50, Appendix B. The NEI template provides flowcharts (Figures II.1-1 and II.1-2) to delineate the organizational interfaces. Staff review identified that the North Anna Unit 3 QAPD does not provide equivalent flow charts. Please provide a clear illustration in the QAPD of the interrelationships between the North Anna corporate and onsite QA organizations.

Dominion Response

Organization charts depicting the organizational interfaces for North Anna Unit 3 (NAPS3) are being developed and will be added to the QAPD. These charts will be provided with the response to RAI Letter No. 21, which also requests additional information regarding the NAPS3 organization.

Proposed COLA Revision

FSAR Appendix 17BB, Part II, Section 1 will be revised to include the requested organization charts.

ENCLOSURE 11

Response to NRC RAI Letter No. 013

RAI Question No. 17.5-5

NRC RAI 17.5-5

10 CFR 52.79 identifies the technical information required to be included in the COL applicant's FSAR. The North Anna Power Station Unit 3 QAPD, Section 2.5, states that "10 CFR 50.34(b)(6)(ii) requires that the Final Safety Analysis Report (FSAR) include, among other things, the managerial and administrative controls to be used to assure safe operation, including a discussion of how the applicable requirements of Appendix B [to 10 CFR Part 50] will be satisfied." The staff notes that 10 CFR Part 52 was revised in August 2007 and that the correct citation is 10 CFR 52.79(a)(27) rather than 10 CFR 50.34(b)(6)(ii). Please update Section 2.5 of the North Anna Power Station Unit 3 QAPD accordingly.

Dominion Response

The citation will be corrected to identify 10 CFR 52.79(a)(27).

Proposed COLA Revision

FSAR Appendix 17BB, Part II, Section 2.5 will be revised to correctly cite 10 CFR 52.79(a)(27) rather than 10 CFR 50.34(b)(6)(ii). This change is shown on the attached FSAR 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 ESBWR 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.

2.4 Periodic Review of the Quality Assurance Program

Management of those organizations implementing the QA program or portions thereof, assess the adequacy of that part of the program for which they are responsible and assure its effective implementation at least once each year or at least once during the life of the activity, whichever is shorter. However, the period for assessing QA programs during the operations phase may be extended to once every two years.

2.5 Issuance and Revision to Quality Assurance Program

Administrative control of the QAPD will be in accordance with 10 CFR 50.55(f) and 10 CFR 50.54(a), as appropriate. Changes to the QAPD are evaluated by nuclear oversight personnel to ensure that such changes do not degrade previously approved quality assurance controls specified in the QAPD. This document shall be revised as appropriate to incorporate additional QA commitments that may be established during the COL application development process. New revisions to the document will be reviewed, at a minimum, by the NAPS3 manager responsible for nuclear oversight and approved by the senior manager responsible for Dominion's nuclear oversight group.

~~10 CFR 50.34(b)(6)(ii)~~ 10 CFR 52.79(a)(27) requires that the Final Safety Analysis Report (FSAR) include, among other things, the managerial and administrative controls to be used to assure safe operation, including a discussion of how the applicable requirements of Appendix B will be satisfied. In order to comply with this requirement, the FSAR references this QAPD and, as a result, the requirements of 10 CFR 50.54(a) are satisfied by and apply to the QAPD.

2.6 Personnel Qualifications

Personnel assigned to implement elements of the QAPD shall be capable of performing their assigned tasks. To this end NAPS3 establishes and maintains formal indoctrination and training programs for personnel performing, verifying, or managing activities within the scope of the QAPD to assure that suitable proficiency is achieved and maintained. Plant and support staff minimum qualification requirements are as delineated in each site's Technical Specifications. Other qualification requirements may be established but will not reduce those required by Technical Specifications. Sufficient managerial depth is provided to cover absences of incumbents. When required by code, regulation, or standard, specific qualification and selection of personnel is conducted in accordance with those requirements as established in the applicable NAPS3 procedures. Indoctrination includes the administrative and technical objectives, requirements of the applicable codes and standards, and the QAPD elements to be employed. Training for positions identified in 10 CFR 50.120 is accomplished according to programs accredited by the National Nuclear Accrediting Board of the National Academy of Nuclear Training that implement a systematic approach to training. Records of personnel training and qualification are maintained.

The minimum qualifications of the senior management position for Dominion's Nuclear Oversight and the management position for NAPS3 Nuclear Oversight are that each holds an engineering or related science degree and has a minimum of four years of related experience (3 of the 4 years must include 2 years of nuclear power plant experience and 1 year of supervisory or management experience. One year of experience performing quality verification activities. Special requirements shall include management and supervisory skills and experience or training in leadership, interpersonal communication, management responsibilities, motivation of personnel, problem analysis and decision making, and administrative policies and procedures. Individuals

ENCLOSURE 12

Response to NRC RAI Letter No. 013

RAI Question No. 17.5-6

NRC RAI 17.5-6

SRP Section 17.5 Section U, "Regulatory Commitments," indicates that the applicant should commit to the most recent revision of certain Regulatory Guides (RGs) and Generic Letters (GLs). Regulatory Guide 1.37, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plant," is included on this list. Section 13.2 of the North Anna Power Station Unit 3 QAPD references the commitment to RG 1.37; however, Part IV, "Regulatory Commitments," of the QAPD does not identify RG 1.37 as a commitment. Please clarify Dominion's intent regarding its commitment to the guidance of RG 1.37 in the North Anna Power Station Unit 3 QAPD.

Dominion Response

As stated in FSAR Appendix 17BB (QAPD), Part II, Section 13.2, North Anna Power Station Unit 3 (NAPS3) commits to comply with the guidance of RG 1.37. This commitment was inadvertently not included in Part IV of the QAPD.

Part IV of the QAPD will be revised to include the NAPS3 commitment to RG 1.37.

Proposed COLA Revision

FSAR Appendix 17BB, Part IV will be revised to include the NAPS3 commitment to RG 1.37. This change is shown on the attached FSAR 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 ESBWR 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.

Dominion**PART IV REGULATORY COMMITMENTS****NRC Regulatory Guides and Quality Assurance Standards**

This section identifies the NRC Regulatory Guides and the other quality assurance standards which have been selected to supplement and support the NAPS3 QAPD. NAPS3 commits to compliance with these standards to the extent described herein. Commitment to a particular Regulatory Guide or other QA standard does not constitute a commitment to the Regulatory Guides or QA standards that may be referenced therein.

Regulatory Guides:

Regulatory Guide 1.26, Revision 4, February 1976 – Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants

Regulatory Guide 1.26 defines classification of systems and components.

NAPS3 commits to the applicable regulatory position guidance provided in this regulatory guide with the exception described in the ESBWR DCD Table 1.9-21, Table 1.9-21a, and Table 1.9-21b.

Regulatory Guide 1.29, Revision 3, September 1978 – Seismic Design Classification

Regulatory Guide 1.29 defines systems required to withstand a safe shutdown earthquake (SSE).

NAPS3 commits to the applicable regulatory position guidance provided in this regulatory guide with the exception described in the ESBWR DCD Table 1.9-21, Table 1.9-21a, and Table 1.9-21b.

Regulatory Guide 1.37, Revision 1, March 2007 – Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants

Regulatory Guide 1.37 provides guidance on specifying water quality and precautions related to the use of alkaline cleaning solutions and chelating agents on systems and components of the power plant.

NAPS3 commits to the applicable regulatory position guidance provided in this regulatory guide during the power plant construction-related and preoperational phase activities.

Standards:

ASME NQA-1-1994 Edition – Quality Assurance Requirements for Nuclear Facility Applications

NAPS3 commits to NQA-1-1994, Parts I and II, as described in the foregoing sections of this document.

Nuclear Information and Records Management Association, Inc. (NIRMA) Technical Guides (TGs)

NAPS3 commits to NIRMA TGs as described in Part II, Section 17 of this document.

ENCLOSURE 13

Response to NRC RAI Letter No. 013

RAI Question No. 17.5-7

NRC RAI 17.5-7

SRP Section 17.5 Section A, "Organization," identifies that the applicant's QAPD should contain an organizational description that addresses the organizational structure, functional responsibilities, levels of authority, and interfaces and, additionally, the description is to include the onsite and offsite organizational elements that function under the cognizance of the QA program. Staff review identified that 1) the North Anna Power Station Unit 3 QAPD provides a reference to FSAR Chapter 13 for more detail description of the operating organization and 2) changes to the QAPD are made under 10 CFR 50.54(a) and changes to the FSAR are made under 10 CFR 50.59. Please clarify whether 10 CFR 50.54(a) or 10 CFR 50.59 is intended to be applicable to changes made to the operating organizational description provided in FSAR Chapter 13.

Dominion Response

FSAR Chapters 13 and 17 both require an organizational description. To minimize the duplication of information between these two Chapters, Dominion elected to describe the detailed organization responsible for the operation of the facility within Chapter 13. This detailed description is incorporated by reference in Chapter 17.

Since the operating organization is implementing the QA program described in Chapter 17, it is appropriate to manage any changes to the organization in accordance with 10 CFR 50.54(a) to ensure NRC review and approval, as required.

Proposed COLA Revision

FSAR Section 13.1.1 will be revised to include the following requirement:

- Changes to the organization described herein are reviewed under the provisions of 10 CFR 50.54(a) to ensure that any reduction in commitments in the QAPD (as accepted by the NRC) are submitted to, and approved by the NRC, prior to implementation.

This change is shown on the attached FSAR 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 ESBWR 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.

Chapter 13 Conduct of Operations

The introductory paragraph of this chapter of the referenced DCD is incorporated by reference with no departures or supplements.

13.1 Organizational Structure of Applicant

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

DCD Section 13.1.1, Combined License Information, is renumbered in this FSAR as Section 13.1.4 for administrative purposes to allow section numbering to be consistent with RG 1.206 and the Standard Review Plan.

Replace the first paragraph with the following.

NAPS COL 13.1-1-A

This section describes the organization of Unit 3. The organizational structure is described in this section and is consistent with the Human System Interface (HSI) design assumptions used in the design of the ESBWR as described in DCD Chapter 18. The organizational structure is consistent with the ESBWR HFE design requirements and complies with the requirements of 10 CFR 50.54(i) through (m).

13.1.1 Management and Technical Support Organization

Dominion has over 35 years of experience in the design, construction, and operation of nuclear generating stations. Dominion and its affiliates currently operates seven nuclear units at four sites located in Virginia, Connecticut, and Wisconsin.

Corporate offices provide support for the nuclear stations. This support includes executive level management to provide strategic and financial support for plant initiatives, coordination of functional efforts division-wide, and functional level management in areas such as training, security, emergency planning, and engineering analysis.

Section 17.5 provides high-level illustrations of the corporate organization. More detailed charts and position descriptions, including qualification requirements and staffing numbers for corporate support staff, are maintained in corporate offices.

Changes to the organization described herein are reviewed under the provisions of 10 CFR 50.54(a) to ensure that any reduction in

commitments in the QAPD (as accepted by the NRC) are submitted to, and approved by the NRC, prior to implementation.

13.1.1.1 Design, Construction, and Operating Responsibilities

The chief nuclear officer (CNO) has overall responsibility for functions involving planning, design, construction, and operation of Dominion's nuclear units. Line responsibilities for those functions are passed to the executives in charge of nuclear operations, engineering and technical services, planning, development, and oversight, who maintain direct control of nuclear plant activities.

The first priority and responsibility of each member of the nuclear staff throughout the life of the plant is nuclear safety. Decision making for station activities is performed in a conservative manner with expectations of this core value regularly communicated to appropriate personnel by management interface, training, and station directives.

Lines of authority and communication clearly and unambiguously establish that utility management directs the project.

At key project milestones, including beginning of construction, fuel load, and commercial operation, senior management will determine if there are sufficient numbers of qualified personnel available to move the project forward.

Key executive and corporate management positions, functions, and responsibilities are discussed in Section 17.5. The construction management organization is shown in Figure 13.1-201.

13.1.1.1.1 Design and Construction Responsibilities

This section is included in Appendix 13AA for future designation as historical information.

13.1.1.2 Technical Support for Plant Operations

This section describes the functional groups that will be activated before fuel load. The site executive will establish the organization of managers, functional managers, supervisors, and staff sufficient to perform required functions for support of safe plant operation. These functions include the following:

- Nuclear, mechanical, structural, electrical, thermal-hydraulic, metallurgical and material, and instrumentation and controls engineering