PMNorthAnna3COLPEmails Resource

From: Thomas Kevern
Sent: Tuesday, June 24, 2008 4:00 PM
To: Dominion.Naps3ColaRAI@DOM.COM
Cc: Regina.Borsh@dom.com; john.hayden@dom.com; Wanda.K.Marshall@dom.com; NorthAnna3COL Resource
Subject: North Anna RAI Letter #013
Attachments: RAI Ltr#013ML0817603341.pdf

Gina:

Attached is the subject RAI letter - includes questions re SRP Sections 09.01.04, 09.01.05, 09.05.04, and 17.5. Please contact me if questions.

Tom

Hearing Identifier: NorthAnna3_Public_EX
Email Number: 94

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Subject: North Anna RAI Letter #013
Sent Date: 6/24/2008 4:00:21 PM
Received Date: 6/24/2008 4:00:24 PM
From: Thomas Kevern

Created By: Thomas.Kevern@nrc.gov

Recipients:
"Regina.Borsh@dom.com" <Regina.Borsh@dom.com>
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Recipients Received:

June 24, 2008

Mr. Eugene S. Grecheck
Vice President – Nuclear Development
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Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 013 (SRP SECTIONS: 09.01.04, 09.01.05, 09.05.04, and 17.5) RELATED TO THE NORTH ANNA UNIT 3 COMBINED LICENSE APPLICATION

Dear Mr. Grecheck:

By letter dated November 26, 2007, Dominion Virginia Power (Dominion) submitted a combined license application for North Anna Unit 3 pursuant to 10 CFR Part 52. The Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application.

The staff has identified that additional information is needed to continue portions of the review and the request for additional information (RAI) is contained in the enclosure to this letter. To support the review schedule, Dominion is requested to respond within 45 days of the date of this letter. If the RAI response involves changes to application documentation, Dominion is requested to include the associated revised documentation with the response.

Should you have questions, please contact me at (301) 415-0224 or Thomas.Kevern@nrc.gov.

Sincerely,

/RA/

Thomas A. Kevern, Senior Project Manager
ESBWR/ABWR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-017

Enclosure: Request for Additional Information

June 24, 2008

Mr. Eugene S. Grecheck
Vice President - Nuclear Development
Dominion
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

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Distribution:

RidsNroDnrlNge1	RHolmes, OGC	ARivera, NRO	TKevern, NRO
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E-RAI Tracking No. 333, 507, 508, 509
ADAMS Accession No.: ML081760334

OFFICE	TR:CQVB	BC:CQVB	PM:DNRL:NGE1	OGC	PM:DNRL:NGE1
NAME	ARivera*	JNakoski*	MEudy*	TKevern for RWeisman *	TKevern *
DATE	05/27/2008	06/22/2008	06/23/2008	06/23/2008	06/24/2008
OFFICE	TR:SBPB	BC:SBPB	PM:DNRL:NGE1	OGC	PM:DNRL:NGE1
NAME	GPurciarello*	PWilson*	TKevern for DGalvin*	TKevern for RWeisman *	TKevern *
DATE	06/18/2008	06/18/2008	06/24/2008	06/24/2008	06/24/2008

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

Request for Additional Information
North Anna, Unit 3
Dominion
Docket Number 52-017
SRP Sections: 09.01.04 - Light Load Handling System (Related to Refueling); 09.01.05 - Overhead Heavy Load Handling Systems; 09.05.04 - Emergency Diesel Engine Fuel Oil Storage and Transfer System; 17.5 - Quality Assurance Program Description - Design Certification, Early Site Permit and New License Applicants
Application FSAR Sections: 9.1.4, 9.1.5, 9.5.4, and 17.5

QUESTIONS

09.01.04-1

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.

09.01.04-2

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.

09.01.05-1

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.

09.01.05-2

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.

09.05.04-1

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.

09.05.04-2

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.

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.

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 COL 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-COL) Phase."

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.

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.

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.

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.

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.