## PMNorthAnna3COLPEmails Resource

**From:** Thomas Kevern
**Sent:** Friday, June 27, 2008 10:47 AM
**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 #014
**Attachments:** RAI Ltr#014ML0817807310.pdf

Gina:

Attached is the subject RAI letter - includes questions re SRP Sections 03.07.01, 03.07.02, and 05.02.04.
Please contact me if questions.

Tom

**Hearing Identifier:** NorthAnna3_Public_EX
**Email Number:** 95

**Mail Envelope Properties** (CEEA97CC21430049B821E684512F6E5E852652AE76)

**Subject:** North Anna RAI Letter #014
**Sent Date:** 6/27/2008 10:46:59 AM
**Received Date:** 6/27/2008 10:47:03 AM
**From:** Thomas Kevern

**Created By:** Thomas.Kevern@nrc.gov

**Recipients:**
"Regina.Borsh@dom.com" <Regina.Borsh@dom.com>
Tracking Status: None
"john.hayden@dom.com" <john.hayden@dom.com>
Tracking Status: None
"Wanda.K.Marshall@dom.com" <Wanda.K.Marshall@dom.com>
Tracking Status: None
"NorthAnna3COL Resource" <NorthAnna3COL.Resource@nrc.gov>
Tracking Status: None
"Dominion.Naps3ColaRAI@DOM.COM" <Dominion.Naps3ColaRAI@DOM.COM>
Tracking Status: None

**Post Office:** HQCLSTR01.nrc.gov

| **Files** | **Size** | **Date & Time** |
|---|---|---|
| MESSAGE | 173 | 6/27/2008 10:47:03 AM |
| RAI Ltr#014ML0817807310.pdf | 102528 | |

**Options**
**Priority:** Standard
**Return Notification:** No
**Reply Requested:** No
**Sensitivity:** Normal
**Expiration Date:**
**Recipients Received:**

June 27, 2008

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 014 (SRP SECTIONS: 03.07.01, 03.07.02, and 05.02.04) 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 U. S. 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 27, 2008

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 014 (SRP SECTIONS: 03.07.01, 03.07.02, and 05.02.04) 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 U. S. 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

Distribution:
RidsNroDnrlNge1
RHolmes, OGC
TKevern, NRO
KHoffman, NRO
RidsNroDnrlNge2
JNakoski, NRO
MLesser, Rgn2
KGruss, NRO
RWeisman, OGC
DDodson, NRO
AHowe, NRO
CPatel, NRO
MChakravorty, NRO
SSamaddar, NRO

E-RAI Tracking No. 30, 35, 37, 43, 47
ADAMS Accession No.: ML081780731 NRO-002

| OFFICE | TR:CIB2 | BC:CIB2 | PM:DNRL:NGE1 | PM:DNRL:NGE1 |
|---|---|---|---|---|
| NAME | KHoffman* | KGruss* | TKevern for CPatel * | TKevern * |
| DATE | 03/12/2008 | 05/09/2008 | 06/25/2008 | 06/27/2008 |
| OFFICE | TR:SEB2 | BC:SEB2 | PM:DNRL:NGE1 | PM:DNRL:NGE1 |
| NAME | MChakravorty* | SSamaddar* | TKevern for CPatel* | TKevern * |
| DATE | 03/17/2008 | 05/07/2008 | 06/25/2008 | 06/27/2008 |

***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: 03.07.01 - Seismic Design Parameters; 03.07.02 - Seismic System Analysis; 05.02.04 - Reactor Coolant Pressure Boundary Inservice Inspection & Testing; Application FSAR Sections: 3.7.1.1.5, 3.7.2.8, 5.2.4,**

QUESTIONS

03.07.01-1

FSAR Section 3.7.1.1, Design Ground Motion, NAPS SUP 3.7-2, Site-Specific Design Ground Motion Time History, states that the site-specific earthquake ground motion time history is described in Section 2.5.4. However, staff review indicates such information is not included in Section 2.5.4. Please identify the appropriate FSAR Sections and Figures that address ground motion time histories.

03.07.02-1

FSAR Section 3.7.2.8, Interaction of Non-Category I Structures with Seismic Category I Structures, incorporates by reference the ESBWR DCD with supplement NAPS SUP 3.7-5. NAPS SUP 3.7-5 references Figure 2.1-201 for the locations of structures. Staff review identified that neither Section 3.7.2.8 nor Figure 2.1-201 include all the information identified in Regulatory Guide (RG) 1.206 (C.I.3.7.2.8) to verify protection of seismic Category I structures from failure of non-Category I structures as a result of seismic effects. Please provide identification and locations of each Category I, II, and nonseismic structures, including the distance between structures and the height of each structure.

05.02.04-1

FSAR Section 5.2 incorporates by reference Section 5.2 of the ESBWR DCD, Revision 4, with standard COL Item STD COL 5.2-1-H and Supplement STD SUP 5.2-1. DCD Section 5.2.4.3.1, in describing the preservice inspection (PSI) program, states all items selected for inservice inspection (ISI) shall be performed once for PSI in accordance with IWB-2200. The staff notes that Section XI typically requires approximately 25% sampling of the Class 1 piping welds to be selected for ISI. In addition, IWB-2200 states preservice examinations are to be extended to include essentially 100% of the pressure retaining welds in all Class 1 components, except in those components exempted from examination by IWB-1220(a), (b), or (c). Please verify compliance with 10 CFR 50.55a(g) and Section XI by describing provisions to satisfy ASME Code, Section XI, Subsection IWB-2200, to extend the preservice examinations to include essentially 100% of the pressure retaining welds in all Class 1 components, except those components exempt from examination by IWB-1220.

05.02.04-2

FSAR Section 5.2.4, Preservice and Inservice Inspection and Testing of Reactor Coolant Pressure Boundary, incorporates by reference the ESBWR DCD as supplemented with

STD COL 5.2-1-H. SRP 5.2.4 and RG 1.206 identify the need for Preservice Inspection programs to comply with Subsubarticle NB-5280 of Section III, Division 1, of the ASME Code. Staff review identified that neither FSAR Section 5.2.4 nor DCD Section 5.2.4 address the PSI program compliance with NB-5280. Please revise FSAR Section 5.2.4 to describe how the PSI program complies with NB-5280.

05.02.04-3

FSAR Section 5.2.4, Preservice and Inservice Inspection and Testing of Reactor Coolant Pressure Boundary, incorporates by reference the ESBWR DCD with supplement STD COL 5.2-1-H. Staff review identified that neither FSAR Section 5.2.4 nor the DCD address conformance with ASME Section XI IWA-2200(b)(2) for PSI exams to be conducted under conditions and with equipment and techniques equivalent to those expected to be employed for subsequent inservice examinations. Please revise FSAR Section 5.2.4 to describe how the ISI/PSI programs will meet IWB-2200(b)(2) for PSI exams to be conducted under conditions and with equipment and techniques equivalent to those expected to be employed for subsequent inservice examinations. The staff notes that if PSI exams do not utilize the same examination techniques as those employed for subsequent inservice examinations, the usefulness of PSI data may be limited when compared to ISI data.

05.02.04-4

FSAR Section 5.2.4 incorporates by reference ESBWR DCD Section 5.2.4 with standard COL item STD COL 5.2-1-H. The DCD was developed to meet the requirements of the 2001 Edition through 2003 Addenda of the ASME Code, Section XI. The staff notes that 10 CFR 50.55a(b)(2) imposes certain limitations/modifications on the use of this code and that the DCD does not address all of these limitations/modifications. Limitations not addressed in the DCD include the areas of Class 1 piping exemptions, Appendix VIII implementation, certification of NDE personnel, surface examinations, and pressure testing of mechanical joints. Please revise FSAR Section 5.2.4 to demonstrate that the limitations/modifications of 10 CFR 50.55a(b)(2) have been incorporated into the PSI/ISI programs.

05.02.04-5

FSAR Section 5.2.4 incorporates by reference Section 5.2.4 of the ESBWR DCD with standard COL Item STD COL 5.2-1-H. The DCD was developed to meet the requirements of the 2001 Edition through 2003 Addenda of the ASME Code, Section XI. The staff notes that 10 CFR 50.55a(b)(2) imposes certain limitations/modifications on the use of this code and one such limitation (reference 10 CFR 50.55a(b)(2)(xix)) states that when using the substitution of alternative methods, the 1997 Addenda of IWA-2240 must be used. Staff review of the DCD identified that DCD Section 5.2.4.3.2 states, “IWA-2240 as written in the 1997 Addenda of ASME Section XI (or later Edition/Addenda that is approved under 10 CFR 50.55a) is used when applying these provisions.” Staff review identified that the parenthetical statement in this sentence could be interpreted to mean that an applicant could use later code editions approved by the staff and incorporated in to 10 CFR 50.55a(b)(2). Please revise FSAR Section 5.2.4 to clarify that use of the provisions of Subsubarticle IWA-2240, “Alternative Examinations,” is limited to the 1997 Addenda as described in the limitation of 10 CFR 50.55a(b)(2)(xix).

05.02.04-6

FSAR Section 5.2.4, Preservice and Inservice Inspection and Testing of Reactor Coolant Pressure Boundary, incorporates by reference the ESBWR DCD with STD COL 5.2-1-H. The staff notes that preservice and inservice examinations required by 10 CFR 50.55a and ASME code, Section XI, include examinations of Class 1 component supports. Staff review identified that neither the DCD nor the FSAR address examination of component supports. Please revise FSAR Section 5.2.4 to clarify that the ISI/PSI programs include component supports of Class 1, 2 and 3 components.

05.02.04-7

FSAR Section 5.2.4 incorporates by reference the ESBWR DCD, Revision 4, with standard COL item STD COL 5.2-1-H. DCD Section 5.2.4.3.4 addresses the qualification of personnel and examination systems for ultrasonic examination in accordance with ASME Section XI, Appendices VII and VIII. The staff notes that Section XI also includes the qualification of ultrasonic examination procedures in accordance with Appendix VIII. Please revise FSAR Section 5.2.4 to address the qualification of ultrasonic examination procedures consistent with ASME Section XI, Appendix VIII.