

PMNorthAnna3COLPEmails Resource

From: Patel, Chandu
Sent: Friday, February 15, 2013 11:37 AM
To: 'na3raidommailbox@dom.com'
Cc: PMNorthAnna3COLPEmails Resource; Carpentier, Marcia; Galvin, Dennis; Patel, Raju; Kavanagh, Kerri
Subject: RAI Letter 111, RAI 6926, Section 14.2, North Anna 3 COLA (52-017)
Attachments: RAI Letter 111 RAI_6926.doc

By letter dated November 26, 2007, Dominion Virginia Power (Dominion) submitted a Combined License Application for North Anna, Unit 3, pursuant to Title 10 of the *Code of Regulations*, Part 52. The U.S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this COLA.

The NRC staff has identified that additional information is needed to continue portions of the review and a Request for Additional Information (RAI), is enclosed. To support the review schedule, Dominion is requested to respond within 30 days of the date of this request. If the RAI response involves changes to the application documentation, Dominion is requested to include the associated revised documentation with the response.

Sincerely,
Chandu Patel
Lead Project Manager for NA3 COLA

Hearing Identifier: NorthAnna3_Public_EX
Email Number: 1125

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Subject: RAI Letter 111, RAI 6926, Section 14.2, North Anna 3 COLA (52-017)
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Request for Additional Information 111

Issue Date: 2/15/2013

Application Title: North Anna, Unit 3 - Docket Number 52-017

Operating Company: Dominion

Docket No. 52-017

Review Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants

Application Section: 14.2.13

QUESTIONS

14.02-15

In accordance with 10 CFR 52.79(a)(28), RG 1.206, Regulatory Position C.III.4.3, "Combined License Information Items That Cannot Be Resolved Before the Issuance of a License," the applicant identified that the initial test program required a license condition in the North Anna Unit 3 (NAPS-3) FSAR Table 13.4-201, "Operational Programs Required by NRC Regulation and Program Implementation," Item 19, Initial Test Program (ITP). In Part 10 of the NAPS-3 COL application, the applicant did not include the license condition specified in FSAR Chapter 13, Table 13.4-201. The NRC staff identified ITP activities that will be subject to a license condition for NAPS-3. At a minimum, the NRC staff identified the following post-COL items concerning FSAR Section 14.2, "Initial Test Program," as license conditions.

License Condition for Post Combined License (COL) Items

License Condition for Preoperational and Startup Test Specifications and Procedures, US-APWR DCD Section 14.2.3, "Test Procedures."

During the post-licensing period, preoperational and startup test procedures will be subject to a license condition for NRC inspections to verify that the licensee implements the ITP. This process shall allow for the performance of necessary plant as-built inspections and walk downs. Therefore, the licensee will make available to on-site NRC inspectors preoperational and startup test specifications and test procedures 60 days prior to their intended use.

License Condition for Preoperational and Startup Test Specifications and Procedures, US-APWR DCD Section 14.2.3, "Test Procedures."

Prior to initiating the plant's ITP, a site specific startup administration manual (SAM) (procedures), which includes administrative procedures and requirements that govern the activities associated with the plant ITP is to be provided to on-site NRC inspectors.

License Condition for the Power Ascension Test Phase, US-APWR DCD Section 14.2.13, COL License Information, COL Item 14.2

Certain milestones in the startup-testing phase of the ITP (e.g., pre-critical testing, criticality testing and low-power testing) should be controlled through this license condition to ensure that the designated licensee management reviews, evaluates, and approves relevant test results before proceeding to the power ascension test phase. Accordingly, the licensee shall perform the following:

- a) Complete all pre-critical and criticality testing and confirm that the test results are within the range of values predicted in the FSAR acceptance criteria. After completing and evaluating criticality test results, the licensee will conduct low-power tests and will operate the facility at reactor steady-state core power levels not in excess of 5 percent power, in accordance with the conditions of the license.
- b) Complete all low-power testing and confirm that the test results are within the range of values predicted in the acceptance criteria in the facility's FSAR. After completing and evaluating low-power test results, the licensee will conduct power ascension testing and will operate the facility at reactor steady-state core power levels not in excess of 100 percent power, in accordance with the conditions of the license.

The licensee shall complete and evaluate the adequacy of all test results and test records above and make them available to on-site NRC inspectors.

License Condition for the Test Program Schedule, US-APWR DCD Section 14.2.11, "Test Program Schedule."

Prior to initial fuel load, the licensee shall submit a schedule, no later than 12 months after issuance of the COL, and updated every 6 months until 12 months before scheduled fuel loading, and every month thereafter until either the operational program for the ITP in North Anna Unit 3 (NAPS-3) COL FSAR Table 13.4-201, Item 19, has been fully implemented or the plant has been placed in commercial service, whichever comes first.

License Condition for Test Changes

Within one month of any ITP changes described in North Anna Unit 3 FSAR Section 14.2, the licensee shall evaluate these changes in accordance with the provisions of 10 CFR 50.59 or Section VIII of the appropriate appendix for the USAPWR DCD under 10 CFR Part 52 and report them in accordance with 10 CFR 50.59(d).

License Condition for First-Plant-Only and First-Three-Plant Only Testing:

A licensee shall provide written identification of the applicable references for documentation for the completion of the testing to the Director of the Office of New Reactors (or equivalent NRC management) within thirty (30) calendar days of the licensee confirmation of acceptable test results.

Subsequent plant licensees crediting completion of testing by the first-plant shall provide a report referencing the applicable documentation identified by the first plant(s) confirming the testing to the Director of the Office of New Reactors (or equivalent NRC management). This report shall be provided to NRC either prior to initiation of pre-operational testing, or within sixty (60) days of the identification of the documentation for the completion of the testing by the first plant (or third plant, as appropriate), whichever is later.

14.02-16

During the review of North Anna COL FSAR Section 14.2.12.1.113, "Ultimate Heat Sink (UHS) System Preoperational Test," the NRC staff identified that this Section had incomplete or missing information. Specifically, the applicant should address in the FSAR:

1. Testing for water hammer (or lack of a water hammer event during system pump starts and stopped).
2. Testing of the UHS transfer pumps with various power supplies (with associated motor operated valves) since the pumps receive power from more than one safety bus).
3. Item A.4 is missing 'interlock'.
4. Testing of the UHS transfer pumps for adequate net positive suction head at the lower water level requirements and testing for lack of UHS transfer pump vortexing.
5. Testing of the freeze protection design features associated with the ESWS/UHS.
6. Testing of the UHS fans (acceptance criteria is missing). If the UHS fans operate at different speeds or directions, this should be clarified.