



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 19, 2012

Mr. David A. Heacock
President and Chief Nuclear Officer
Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: NORTH ANNA POWER STATION, UNIT NOS. 1 AND 2 - AUDIT OF VIRGINIA
ELECTRIC AND POWER COMPANY'S MANAGEMENT OF REGULATORY
COMMITMENTS (TAC NOS. ME6573 AND ME6574)

Dear Mr. Heacock:

In Regulatory Issue Summary 2000-17, "Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC [Nuclear Regulatory Commission] Staff," dated September 21, 2000, the NRC informed licensees that the Nuclear Energy Institute (NEI) document NEI 99-04, "Guidelines for Managing NRC Commitment Changes," contains acceptable guidance for controlling regulatory commitments and encouraged licensees to use the NEI guidance or similar administrative controls to ensure that regulatory commitments are implemented and that changes to the regulatory commitments are evaluated and, when appropriate, reported to the NRC. The NRC Office of Nuclear Reactor Regulation has instructed its staff to perform an audit of licensees' commitment management programs once every 3 years to determine whether the licensees' programs are consistent with the industry guidance in NEI 99-04, and that the regulatory commitments are being effectively implemented.

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On August 8, 2011, the NRC staff performed an audit of Virginia Electric and Power Company's (the licensee) commitment management program at North Anna Power Station, Unit Nos. 1 and 2. The NRC staff concludes that based on the audit: (1) the licensee had implemented NRC commitments on a timely basis, and (2) the licensee had implemented an effective program for managing NRC commitment changes. Details of the audit are set forth in the enclosed audit report.

Sincerely,



Karen Cotton, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339

Enclosure:
Audit Report

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AUDIT REPORT BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REGULATORY COMMITMENTS MADE BY VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-338 AND 50-339

1.0 INTRODUCTION AND BACKGROUND

In Regulatory Issue Summary 2000-17, "Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC [Nuclear Regulatory Commission Staff," dated September 21, 2000, the NRC informed licensees that the Nuclear Energy Institute (NEI) document NEI 99-04, "Guidelines for Managing NRC Commitment Changes," contains acceptable guidance for controlling regulatory commitments and encouraged licensees to use the NEI guidance or similar administrative controls to ensure that regulatory commitments are implemented and that changes to the regulatory commitments are evaluated and, when appropriate, reported to the NRC.

The NRC Office of Nuclear Reactor Regulation (NRR) has instructed its staff to perform an audit of licensees' commitment management programs once every 3 years to determine whether the licensees' programs are consistent with the industry guidance in NEI 99-04, and that the regulatory commitments are being effectively implemented.

NEI-99-04 defines a regulatory commitment as an explicit statement to take a specific action agreed to, or volunteered by, a licensee and submitted in writing on the docket to the NRC. NRR guidelines direct the NRR Project Manager to audit the licensee's commitment management program by assessing the adequacy of the licensee's implementation of a sample of commitments made to the NRC in past licensing actions (amendments, reliefs, exemptions, etc.) and activities (bulletins, generic letters, etc.). The audit is to be performed every 3 years.

2.0 AUDIT PROCEDURE AND RESULTS

The regulatory commitment management audit was previously performed at North Anna Power Station, Unit Nos. 1 and 2 (NAPS) on September 18, 2008, covering the period of approximately 3 years. The current audit was performed at NAPS on August 8, 2011, verifying the regulatory commitments made by Virginia Electric and Power Company (the licensee) since the previous audit.

The audit consisted of two major parts: (1) verification of the licensee's implementation of NRC commitments that have been implemented and (2) verification of the licensee's program for managing changes to NRC commitments.

Enclosure

2.1 Verification of Licensee's Implementation of NRC Commitments

The primary focus of this part of the audit is to confirm that the licensee has implemented commitments made to the NRC as part of past licensing actions/activities. For commitments not yet implemented, the NRC staff determines whether they have been captured in an effective program for future implementation.

2.1.1 Audit Scope

The audit addressed a sample of commitments made during the review period. The audit focused on regulatory commitments (as defined above) made in writing to the NRC as a result of past licensing actions (amendments, exemptions, etc.) or licensing activities (bulletins, generic letters, etc.). Before the audit, the NRC staff searched ADAMS (Agencywide Documents Access and Management System) for the licensee's submittals since the last audit and selected a representative sample for verification.

The audit excluded the following types of commitments that are internal to licensee processes:

- (1) Commitments made on the licensee's own initiative among internal organizational components.
- (2) Commitments that pertain to milestones of licensing actions/activities (e.g., respond to an NRC request for additional information by a certain date). Fulfillment of these commitments was indicated by the fact that the subject licensing action/activity was completed.
- (3) Commitments made as an internal reminder to take actions to comply with existing regulatory requirements such as regulations, Technical Specifications (TSs), and Updated Final Safety Analysis Reports. Fulfillment of these commitments was indicated by the licensee having taken timely action in accordance with the subject requirements.

2.1.2 Audit Results

The attached Audit Summary provides details of the audit and its results.

The NRC staff reviewed documents generated by the licensee for the commitments listed in Table 1. After identification, most commitments were managed through the NAPS Central Reporting System. The NRC staff found that the licensee had properly addressed each regulatory commitment selected for this audit. As a result of reviewing the licensee's information, as well as information from other sources, the NRC staff found no reason to differ from the licensee's reported status of the audited commitments. Thus, the NRC staff concludes that the procedure used by the licensee to manage commitments is appropriate and effective.

2.2 Verification of the Licensee's Program for Managing NRC Commitment Changes

The primary focus of this part of the audit is to verify that the licensee has established administrative controls for modifying or deleting commitments made to the NRC. The NRC staff compared the licensee's process for controlling regulatory commitments to the guidelines in NEI-99-04, which the NRC has found to be an acceptable guide for licensees to follow for

managing and changing commitments. The process used at NAPS is contained in "Commitment Management," LI-AA-110, Revision 0. In general, LI-AA-110, Revision 0, follows the guidance of NEI-99-04; it sets forth the need for identifying, tracking, and reporting commitments, and it provides a mechanism for changing commitments. The audit reviewed a sample of commitment changes that included changes that were or will be reported to the NRC. The audit also verifies that the licensee's commitment management system includes a mechanism to ensure traceability of commitments following initial implementation. This ensures that licensee personnel are able to recognize that future proposed changes to the affected design features or operating practices require evaluation in accordance with the commitment change control process.

3.0 CONCLUSION

The NRC staff concludes that based on the above audit: (1) the licensee had implemented, or is tracking for future implementation, regulatory commitments; and (2) the licensee had implemented an effective program to manage regulatory commitment changes.

4.0 LICENSEE PERSONNEL CONTACTED FOR THIS AUDIT

Jay Leberstien, Licensing Engineer, Licensing Department, North Anna Power Station

Principal Contributor: K. Cotton

Attachment: Summary of Audit Results

**Regulatory Commitments Made During the Period from 01/2008 – 2/2011 chosen for Audit
North Anna Power Station Units 1 and 2**

Item No.	Commitments	Letter Serial No.	Letter Date	Letter Subject	Status
1	<ul style="list-style-type: none"> • The North Anna Power Station, Unit Nos. 1 and 2 (NAPS) Updated Final Safety Analysis Report (UFSAR) revisions will be completed by the end of the Spring 2009 Unit 1 refueling outage. • Regarding evaluation of the industry/Nuclear Regulatory Commission (NRC) Technical Specifications Task Force (TSTF) Traveler that will be developed as a follow-up to Generic Letter (GL) 2008-01, the completion date for this corrective action is dependent on the approval of the TSTF. Virginia Electric and Power Company (VEPCO, the licensee) is continuing to support the industry and Nuclear Energy Institute (NEI) Gas Accumulation Management Team activities regarding the resolution of generic technical specification (TS) changes via the TSTF Traveler process. After NRC approval of the Traveler, VEPCO will evaluate its applicability to NAPS and evaluate adopting the Traveler to either supplement or replace the current TS requirements. 	08-0013B	10-14-08	Nine-Month Response to NRC GL 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, And Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML1082890094)	OPEN: Waiting on NRC TSTF approval

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Item No.	Commitments	Letter Serial No.	Letter Date	Letter Subject	Status
	<ul style="list-style-type: none"> • VEPCO will monitor the results of industry testing and analytical programs related to gas accumulation and pump suction acceptance criteria and determine if any additional changes to any licensing basis documents are required. The completion date for this corrective action is dependent on the completion of industry testing and analytical programs. • VEPCO will revise current fill and vent and test procedures as appropriate to assure sufficiently full acceptance criteria, based upon the technical criteria developed for this response, by adding Ultrasonic Testing, venting or other confirmation means at select locations. These changes will be completed prior to the completion of the Unit 1 Spring 2009 refueling outage. 				
2	Implement Tier 2 restrictions in Table 5 of December 17, 2007 letter with each entry into the extended Completion Time for cleaning and recoating the emergency diesel generator (EDG) fuel oil (FO) tanks.	08-571	09-26-08	EDG FO Tank Extended Completion Time LAR (ADAMS Accession No. ML082700861)	CLOSED
3	Corrective actions for resolution of potential chemical and downstream effects on the reactor core and flowpaths will be determined and reported to the NRC within 90 days	09-003	02-27-09	Updated Supplemental Response to NRC GL 2004-02, Potential Impact of Debris Blockage on	OPEN: Waiting on Westinghouse Issuance of WCAP

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Item No.	Commitments	Letter Serial No.	Letter Date	Letter Subject	Status
	<p>following the issuance of revised WCAP-16793-NP and the associated NRC Safety Evaluation Report (SER).</p>			<p>Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors</p>	
4	<ul style="list-style-type: none"> • VEPCO will perform the final acceptance of the North Anna Power Station, Unit No. 1 uncertainty analysis to ensure the results are bounded by the statements contained in this LAR (Attachment 5 Section I.1.D.4.1). (Prior to operating above 2893 megawatt (MWt) (98.4% rated power (RP)).) • Technical Requirements Manual (TRM) will be revised to include ultrasonic flow meter (UFM) administrative controls (Attachment 1 Section 3.0). (Prior to operating above 2893 MWt (98.4% RP).) • Revise procedures, programs, and documents for the new UFM (including transducer replacement) (Attachment 5 Section I.1, I.1.D.1.1, I.1.H, VII.1, VII.2.A, and VII.4). (Prior to operating above 2893 MWt (98.4% RP).) • Appropriate personnel will receive training on the UFM and affected procedures 	09-033	03-26-09	<p>License Amendment Request, (LAR) Measurement Uncertainty Recapture (MUR) Power Uprate (ADAMS Accession No. ML090970785)</p>	CLOSED

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	<p>(Attachment 5 Sections I.1.D.1.1, VII.2.A, VII.2.D, and VII.3). (Prior to operating above 2893 MWt (98.4% RP).)</p> <ul style="list-style-type: none"> • The FAC CHECWORKS SFA models will be updated to reflect the MUR power uprate conditions (Attachment 5 Section IV.1.E.iii). (Prior to operating above 2893 MWt (98.4% RP).) • Simulator changes and validation will be completed (Attachment 5 Section VII.2.C). (Prior to operating above 2893 MWt (98.4% RP).) • Revise existing plant operating procedures related to temporary operation above full steady-state licensed power levels (Attachment 5 Section VII.4). (Prior to operating above 2893 MWt (98.4% RP).) • Determine environmental qualification (EQ) service life for excore detectors (Attachment 5, Sections II.2). (Prior to operating above 2893 MWt (98.4% RP).) 				
5	Remove plant specific TS requirements concurrent with implementation of Title 10 of the Code of Federal Regulations, Part 26 but	09-083	02-06-09	Work hour LAR (ADAMS Accession No. ML090400465	CLOSED

Regulatory Commitments Made During the Period from 01/2008 – 2/2011 chosen for Audit North Anna Power Station Units 1 and 2					
Item No.	Commitments	Letter Serial No.	Letter Date	Letter Subject	Status
	no later than October 1, 2009				
6	Confirm that the variation in flow normalization factor over 48-hour period is negligible and that the normalized venturi flows are an acceptable surrogate for the UFM flows during the 48-hour Completion Time prior to use above 2893 MWt	09-412	07-08-09	MUR LAR (ADAMS Accession No. ML090970785)	CLOSED
7	Submit a supplement to the Unit 2 4 th interval inservice inspection (ISI) Plan addressing the risk-informed scope and modification to the examination requirements of affected piping and components	10-007	2-01-10	Unit 2 4 th Interval ISI Program (ADAMS Accession No. ML100330125)	CLOSED
8	<ul style="list-style-type: none"> • Ensure the core reload process will ensure that the Conditions and Limitations of the NRC SER for Optimized ZIRLO are met when a batch of Optimized ZIRLO is implemented. • Confirm that Westinghouse will provide the NRC additional confirmatory data associated with lead test assembly programs at other facilities prior to subsequent cycles of operation with Optimized ZIRLO fuel rod cladding. 	10-205	05-06-10	Proposed LAR Optimized ZIRLO (ADAMS Accession No. ML101260517)	CLOSED
9	Submit the remaining requested information as soon as possible after the current refueling outage, but no later than	10-114B	09-27-10	Reactor Coolant Pump Oil Collection System Exemption (ADAMS	CLOSED

**Regulatory Commitments Made During the Period from 01/2008 – 2/2011 chosen for Audit
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Item No.	Commitments	Letter Serial No.	Letter Date	Letter Subject	Status
	November 15, 2010.			Accession No. ML102710525)	
10	<p>Summarize the results of the analysis listed below:</p> <ul style="list-style-type: none"> • Nozzles specific stress analyses shall be performed to establish a residual stress profile in the nozzle. ID weld repairs shall be assumed in the analyses to effectively bound any actual weld repair that may have occurred in the nozzles. • Fracture mechanics analyses shall be performed to predict crack growth. Crack growth due to primary water stress corrosion cracking and fatigue crack growth in the original dissimilar metal weld shall be evaluated. • The analyses shall demonstrate that the application of the weld overlays does not impact the conclusion of the existing stress reports. American Society of Mechanical Engineers, <i>Boiler and Pressure Vessel Code</i> Section III stress and fatigue criteria shall be met for the regions of the overlays remote from observed (or 	11-120	03-30-11	Request Alternative for weld overlay of steam generator nozzles (ADAMS Accession No. ML11090566)	OPEN: Due date 4/12/2012

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	<p>assumed) cracks.</p> <p>The following information will be submitted to the NRC within 14 days of completion of the final ultrasonic exams of the overlays.</p> <ul style="list-style-type: none">• A listing of the indications• The disposition of all indications using the standards of ASME Code Section XI, IWB 3514-2 and or IWB 3514-3 criteria and if possible, the type and nature of the indication. <p>Also included in the results will be a discussion of any repairs to the overlay material and/or base metal and the reason for the repair.</p>				

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/RA/

Karen Cotton, Project Manager
Plant Licensing Branch II-1
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