



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

September 28, 2011

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, ISSUANCE OF AMENDMENTS REGARDING REVISION OF OPERABILITY REQUIREMENTS AND ACTIONS FOR REACTOR COOLANT SYSTEM LEAKAGE DETECTION INSTRUMENTATION (REGARDING TECHNICAL SPECIFICATION TASK FORCE (TSTF) 513) (TAC NOS. ME6140 AND ME6141)

Dear Mr. Heacock:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 265 and 246 to Renewed Facility Operating License Nos. NPF-4 and NPF-7 for the North Anna Power Station, Unit Nos. 1 and 2, respectively. The amendments change the Technical Specifications (TSs) in response to your application dated April 27, 2011.

These amendments revise TS 3.4.15, "RCS [reactor coolant system] Leakage Detection Instrumentation." Specifically, the amendments define a new time limit for restoring inoperable RCS leakage detection instrumentation to operable status and establish alternate methods of monitoring RCS leakage when one or more required leakage detection monitors are inoperable.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick G. Boyle", followed by a horizontal line.

Patrick G. Boyle, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339

Enclosures:

1. Amendment No. 265 to NPF-4
2. Amendment No. 246 to NPF-7
3. Safety Evaluation

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

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 265  
Renewed License No. NPF-4

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company et al., (the licensee) dated April 27, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-4 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 265 , are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Gloria Kulesa, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to License No. NPF-4  
and the Technical Specifications

Date of Issuance: September 28, 2011



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

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-339

NORTH ANNA POWER STATION, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 246  
Renewed License No. NPF-7

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company et al., (the licensee) dated April 27, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

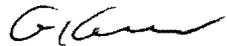
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-7 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 246 , are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Gloria Kulesa, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to License No. NPF-7  
and the Technical Specifications

Date of Issuance: September 28, 2011

ATTACHMENT

TO LICENSE AMENDMENT NO. 265

RENEWED FACILITY OPERATING LICENSE NO. NPF-4

DOCKET NO. 50-338

AND

TO LICENSE AMENDMENT NO. 246

RENEWED FACILITY OPERATING LICENSE NO. NPF-7

DOCKET NO. 50-339

Replace the following pages of the Licenses and the Appendix "A" Technical Specifications (TSs) with the enclosed pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

Licenses

License No. NPF-4, page 3

License No. NPF-7, page 3

TSs

3.4.15-2

Insert Pages

Licenses

License No. NPF-4, page 3

License No. NPF-7, page 3

TSs

3.4.15-2

- (2) Pursuant to the Act and 10 CFR Part 70, VEPCO to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report;
  - (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, VEPCO to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
  - (4) Pursuant to the Act and 10 CFR Parts 30,40, and 70, VEPCO to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material, without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or component; and
  - (5) Pursuant to the Act and 10 CFR Parts 30 and 70, VEPCO to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level  
VEPCO is authorized to operate the North Anna Power Station, Unit No.1, at reactor core power levels not in excess of 2940 megawatts (thermal).
  - (2) Technical Specifications  
The Technical Specifications contained in Appendix A, as revised through Amendment No. 265 are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

- (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, VEPCO to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, VEPCO to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material, without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, VEPCO to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations as set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

VEPCO is authorized to operate the facility at steady state reactor core power levels not in excess of 2940 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 246 are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Additional Conditions

The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following the issuance of the condition or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the renewed license supported by a favorable evaluation by the Commission:

- a. If VEPCO plans to remove or to make significant changes in the normal operation of equipment that controls the amount of radioactivity in effluents from the North Anna Power Station, the

RCS Leakage Detection Instrumentation  
3.4.15

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required containment atmosphere radioactivity monitor inoperable.	B.1.1 Analyze grab samples of the containment atmosphere.	Once per 24 hours
	<u>OR</u>	
	B.1.2 -----NOTE----- Not required until 12 hours after establishment of steady state operation. -----  Perform SR 3.4.13.1.	Once per 24 hours
	<u>AND</u>	
	B.2 Restore required containment atmosphere radioactivity monitor to OPERABLE status.	30 days
C. Required containment sump monitor inoperable.	-----NOTE----- Only applicable when the containment atmosphere gaseous radiation monitor is the only OPERABLE monitor. -----	
	C.1 Analyze grab samples of the containment atmosphere.	Once per 12 hours
	<u>AND</u>	
	C.2 Restore required containment sump monitor to OPERABLE status.	7 days
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	D.2 Be in MODE 5.	36 hours
E. All required monitors inoperable.	E.1 Enter LCO 3.0.3.	Immediately



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 265

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-4

AND

AMENDMENT NO. 246

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-338 AND 50-339

1.0 INTRODUCTION

By letter dated April 27, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML111190093), Virginia Electric and Power Company (VEPCO, the licensee) submitted a request for changes to the North Anna Power Station, Unit Nos. 1 and 2 (North Anna 1/2), Technical Specifications (TSs). The proposed changes revise TS 3.4.15, "RCS [Reactor Coolant System] Leakage Detection Instrumentation," and include TS Bases changes that summarize and clarify the purpose of the TS and the specified safety function of the leakage detection monitors.

The licensee stated that the license amendment request (LAR) is consistent with Nuclear Regulatory Commission (NRC)-approved Revision 3 to Technical Specification Task Force (TSTF) Standard Technical Specification (STS) Change Traveler, TSTF-513, "Revise PWR [pressurized water reactor] Operability Requirements and Actions for RCS Leakage Instrumentation." The availability of this TS improvement was announced in the *Federal Register* (FR) on January 3, 2011 (76 FR 189) as part of the consolidated line item improvement process (CLIIP).

2.0 REGULATORY EVALUATION

The NRC's regulatory requirements related to the content of the TS are contained in Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.36. Paragraph (c)(2)(i) of 10 CFR 50.36 states that limiting conditions for operation (LCOs) are the lowest functional capability or performance levels of equipment required for safe operation of the facility. Paragraph (c)(2)(ii) of 10 CFR 50.36 lists four criteria for determining whether particular items are required to be included in the TS LCOs. The first criterion applies to installed

instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary (RCPB). As described in the FR Notice associated with this regulation (60 FR 36953, July 16, 1995), the scope of the TS includes two general classes of technical matters: (1) those related to prevention of accidents, and (2) those related to mitigation of the consequences of accidents. Criterion 1 addresses systems and process variables that alert the operator to a situation when accident initiation is more likely, and supports the first of these two general classes of technical matters which are included in the TSs. As specified in Paragraph (c)(2)(i) of 10 CFR 50.36, when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TS until the condition can be met.

The NRC's guidance for the format and content of a PWR TS can be found in NUREG-1431, Revision 3.0, "Standard Technical Specifications Westinghouse Plants." STS 3.4.15, "RCS Leakage Detection Instrumentation," contains the guidance specific to the RCS leakage detection instrumentation for PWRs. The STS Bases provide a summary statement of the reasons for the STS.

The Bases for STS 3.4.15 contained in NUREG-1431, Revision 3.0, provide background information, the applicable safety analyses, a description of the LCO, the applicability for the RCS leakage detection instrumentation TS, and describe the Actions and Surveillance Requirements. The TS Bases provide the purpose or reason for the TSs which are derived from the analyses and evaluation included in the safety analysis report, and for these specifications, the RCS leakage detection instrumentation design assumptions and licensing basis for the plant.

As stated in NRC Information Notice (IN) 2005-24, "Non-conservatism in Leakage Detection Sensitivity" (ADAMS Accession No. ML051780073), the reactor coolant activity assumptions for containment atmosphere gaseous radioactivity monitors may be non-conservative. This means the monitors may not be able to detect a one gallon per minute (GPM) leak within 1 hour under all likely operating conditions.

The issue described in IN 2005-24 has raised questions regarding the operability requirements for containment atmosphere gaseous radioactivity monitors. TSTF-513, Revision 3, revises the TS Bases to reflect the proposed TS changes and more accurately describe the contents of the facility design basis related to operability of the RCS leakage detection instrumentation. Part of the TS Bases changes revise the specified safety function of the RCS leakage detection monitors to specify the required instrument sensitivity level. In addition, TSTF-513, Revision 3, includes revisions to TS Actions for RCS leakage detection instrumentation to establish limits for operation during conditions of reduced monitoring sensitivity because of inoperable RCS leakage detection instrumentation.

The regulation at 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 30, "Quality of Reactor Coolant Pressure Boundary," requires means for detecting and, to the extent practical, identifying the location of the source of RCS leakage. Regulatory Guide (RG) 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973, describes acceptable methods of implementing the GDC 30 requirements with regard to the selection of leakage detection systems for the RCPB.

RG 1.45, Revision 0, Regulatory Position C.2, states that "Leakage to the primary reactor containment from unidentified sources should be collected and the flow rate monitored with an accuracy of one gallon per minute (gpm) or better."

RG 1.45, Revision 0, Regulatory Position C.3 states:

At least three separate detection methods should be employed and two of these methods should be (1) sump level and flow monitoring and (2) airborne particulate radioactivity monitoring. The third method may be selected from the following: a. monitoring of condensate flow rate from air coolers [or] b. monitoring of airborne gaseous radioactivity. Humidity, temperature, or pressure monitoring of the containment atmosphere should be considered as alarms or indirect indication of leakage to the containment.

RG 1.45, Revision 0, Regulatory Position C.5 states, "The sensitivity and response time of each leakage detection system in regulatory position 3. above employed for unidentified leakage should be adequate to detect a leakage rate, or its equivalent, of one gpm in less than one hour." RG 1.45, Revision 0, states, "In analyzing the sensitivity of leak detection systems using airborne particulate or gaseous radioactivity, a realistic primary coolant radioactivity concentration assumption should be used. The expected values used in the plant environmental report would be acceptable." The appropriate sensitivity of a plant's containment atmosphere gaseous radioactivity monitors is dependent on the design assumptions and the plant-specific licensing basis as described in the plant's final safety analysis report (FSAR). The NRC staff's approval of the use of expected primary coolant radioactivity concentration values used in the environmental report creates a potential licensing conflict when a licensee is able to achieve and maintain primary coolant radioactivity concentration values lower than the value assumed in the environmental report.

RG 1.45, Revision 1, "Guidance on Monitoring and Responding to Reactor Coolant System Leakage," was issued in May 2008. RG 1.45, Revision 1, describes methods for implementing GDC 30 requirements that are different from those in RG 1.45, Revision 0, and was developed and issued to support new reactor licensing. Revision 1 allows that having two TS leakage detection methods capable of detecting a one gpm leak within 1 hour provides adequate leakage detection capability from a safety perspective. It recommends that other potential indicators (including the gaseous radiation monitors) be maintained even though they may not have the same detection capability. These indicators, in effect, provide additional defense-in-depth.

The regulation in GDC 4 of Appendix A to 10 CFR Part 50, "Environmental and dynamic effects design bases," requires structures, systems, and components important to safety to be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents. GDC 4 allows the use of leak before break (LBB) technology to exclude dynamic effects of pipe ruptures in the design bases when analyses reviewed and approved by the Commission demonstrate that the probability of fluid system piping rupture is extremely low under conditions consistent with the design basis for the piping.

North Anna 1/2 are not designed specifically to meet the GDC 30 criterion because the licenses were issued prior to this requirement. As stated in updated FSAR Section 3.1, "Conformance

with AEC [Atomic Energy Commission] General Design Criteria," "North Anna Power Station, Units 1 and 2, was issued construction permit nos. CPPR-77 and CPPR-78 dated February 1971, based on the station design being in conformance with the *General Design Criteria for Nuclear Power Plants*, published in 1966. However, to facilitate review by the AEC, the following section discusses the design of the station relative to the new design criteria published in 1971." The licensee meets the intent of GDC 30 through various methods to identify RCS leakage sources.

An NRC safety evaluation dated December 5, 1988, Reference 3, verified the licensee's compliance with R.G. 1.45. The safety evaluation stated:

NA-1&2 have RCS pressure boundary leak detection systems which are consistent with the guidelines of Regulatory Guide 1.45 such that a leakage of 1 gallon per minute (gpm) can be detected. The calculated leak rate through the postulated flaw is large relative to the staff's required sensitivity of the plant's leak detection systems; the margin is at least a factor of 10 on leakage and is consistent with the guidelines of NUREG-1061, Volume 3.

### 3.0 TECHNICAL EVALUATION

In adopting the changes to the TSs included in TSTF-513, Revision 3, the licensee proposed to revise TS 3.4.15, "RCS Leakage Detection Instrumentation," Conditions and Required Actions. The licensee proposed adding new Condition C to TS 3.4.15. New Condition C would be applicable when the containment atmosphere gaseous radioactivity monitor is the only operable RCS leakage detection monitor. This new Condition is necessary because improved fuel integrity and the resulting lower primary coolant radioactivity concentration affects a plant's containment atmosphere gaseous radioactivity monitor to a greater extent than other monitors. The proposed Required Actions for new Condition C require the licensee to analyze grab samples of the containment atmosphere once per 12 hours and restore the required containment sump monitor to operable status within 7 days. These actions are in addition to the Required Action of Condition A, which requires performing an RCS mass balance once per 24 hours.

The NRC staff determined that the proposed Condition C is more restrictive than the current requirement. The existing LCO allows for either RCS leakage detection instrument to be inoperable for up to 30 days. The new LCO imposes the additional requirement to restore the containment sump to operable status within 7 days when relying on the containment gaseous radiation monitor for RCS leakage detection. The new Condition C also imposes the requirement to analyze grab samples of the containment atmosphere when relying on the containment gaseous radiation monitor for RCS leakage detection. The proposed Actions and Completion Times are adequate because the grab samples combined with the more frequent RCS mass balances will provide an alternate method of monitoring RCS leakage when the containment atmosphere gaseous radioactivity monitor is the only operable RCS leakage detection monitor and the 12-hour interval is sufficient to detect increasing RCS leakage long before a piping flaw could progress to a catastrophic failure of the primary RCPB. Allowing 7 days to restore another RCS leakage monitor to operable status is reasonable given the diverse methods employed in the Required Actions to detect an RCS leak and the low probability of a large RCS leak during this period. Proposed Condition C is conservative relative to the STS, sufficiently alerts the operating staff, provides a comparable ability to detect RCS leakage, and

provides time intervals that are reasonable. Therefore, the NRC staff determined that proposed Condition C provides an adequate assurance of safety when judged against current regulatory standards.

Certain ASME Code Class 1 piping systems in North Anna 1 and 2 have been approved by the NRC for LBB. The basic concept of LBB is that certain piping material has sufficient fracture toughness, i.e., ductility, to resist rapid flaw propagation; thereby minimizing the probability of a pipe rupture. The licensee has evaluated postulated flaws in primary loop piping and determined the piping has sufficient fracture toughness that the postulated flaw would not lead to pipe rupture and potential damage to adjacent safety-related systems, structures and components before the plant could be placed in a safe, shutdown condition. The NRC staff has previously reviewed and approved these plant-specific LBB analyses. Before remotely approaching a pipe rupture, the postulated flaw would lead to limited but detectable leakage, which would be identified by the leak detection systems in time for the operator to take action. The NRC staff previously addressed concerns that LBB depends on erroneous leak rate measurements in the final rulemaking for use of LBB technology. In addressing the concerns, it was noted (in Reference 4) that:

One criterion for application of leak-before-break is that postulated flaw sizes be large enough so that the leakage is about ten times the leak detection capability, and that this flaw be stable even if earthquake loads are applied to the pipe in addition to the normal operating loads. This margin of a factor of ten is more than ample to account for uncertainties in both leakage rate calculations and leak detection capabilities. Furthermore, additional sensitivity studies reported by Lawrence Livermore National Laboratory in NUREG/CR-2189, dated September 1981, entitled "Probability of Pipe Fracture in the Primary Coolant Loop of a PWR Plant" indicate that even in the absence of leak detection, the probability of pipe ruptures in PWR primary coolant loop piping is sufficiently low to warrant exclusion of these events from the design basis. (51 FR 12502-01)

The proposed actions for inoperable RCS leakage detection instrumentation maintain sufficient continuity, redundancy, and diversity of leakage detection capability that an extremely low probability of undetected leakage leading to pipe rupture is maintained. This extremely low probability of pipe rupture continues to satisfy the basis for acceptability of LBB in GDC 4.

The licensee proposes minor changes to ensure continuity of the TS format. These changes re-letter current Condition C, which applies when the required action and the associated completion time are not satisfied, to Condition D, and current Condition D, which applies when all required monitors are inoperable, to Condition E. Similar changes were made to the associated Required Actions. The NRC staff determined that these changes are editorial, and therefore acceptable.

The associated TS Bases submitted with the licensee's proposed revision for TS 3.4.15 reflect the proposed TS changes and more accurately describe the contents of the facility design basis related to operability of the RCS leakage detection instrumentation and reflect the proposed TS changes. The proposed TS Bases changes related to the operability of the RCS leakage detection instrumentation are acceptable because they provide background information, the applicable safety analyses, a description of the limiting condition for operation, and the applicability for the RCS leakage detection instrumentation TS and are consistent with the

design basis of the facility. These instruments satisfy Criterion 1 of 10 CFR 50.36(c)(2)(ii) in that they are installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the RCPB.

The NRC staff evaluated the licensee's proposed changes against the applicable regulatory requirements listed in Section 2 of this SE. The NRC staff also compared the proposed changes to the changes made to the STSs by TSTF-513, Revision 3. The NRC staff determined that all the proposed changes afford adequate assurance of safety when judged against current regulatory standards. Therefore, the NRC staff finds the proposed changes acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Virginia State official was notified of the proposed issuance of the amendments. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (76 FR 31377). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

#### 7.0 REFERENCES

1. North Anna 1 and 2, "LAR for Adoption of Technical Specification Task Force (TSTF)-513, Revision 3, 'Revise PWR Operability Requirements and Actions for RCS Leakage Instrumentation'" (ADAMS Accession No. ML111190093).
2. Submittal of TSTF-513, Revision 3 (ADAMS Accession No. ML102360355).
3. North Anna 1 and 2, "Issuance of License Amendments Re: Reactor Coolant Pump and Steam Generator Supports" (ADAMS Accession No. ML013460407).

4. *Federal Register* Notice (51 FR 12502), "10 CFR Part 50, Modification of General Design Criterion 4 Requirements for Protection Against dynamic Effects of Postulated Pipe Ruptures," April 11, 1986.

Principal Contributors: K. Hemphill  
M. Hamm

Date: September 28, 2011

September 28, 2011

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, ISSUANCE OF AMENDMENTS REGARDING REVISION OF OPERABILITY REQUIREMENTS AND ACTIONS FOR REACTOR COOLANT SYSTEM LEAKAGE DETECTION INSTRUMENTATION (REGARDING TECHNICAL SPECIFICATION TASK FORCE (TSTF) 513) (TAC NOS. ME6140 AND ME6141)**

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A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

*/RA/*

Patrick G. Boyle, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339

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\*by memo date 8/5/11

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