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

February 29, 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, UNITS 1 AND 2, ISSUANCE OF AMENDMENTS REGARDING ADDITION OF ANALYTICAL METHODOLOGY TO CORE OPERATING LIMITS REPORT FOR BEST ESTIMATE LARGE BREAK LOSS-OF-COOLANT ACCIDENT (TAC NOS. ME4933 AND ME4934)

Dear Mr. Heacock:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 267 and 248 to Renewed Facility Operating License Nos. NPF-4 and NPF-7 for the North Anna Power Station, Units 1 and 2 (NAPS 1 and 2), respectively. The amendments change the Technical Specifications (TSs) in response to your application dated October 21, 2010, as supplemented June 23 and August 22, 2011.

These amendments add a reference to Technical Specification 5.6.5.b, "Core Operating Limits Report (COLR)," to permit the use of the "Westinghouse Best Estimate Large Break Loss-of-coolant accident (BE-LBLOCA) Evaluation Methodology using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)" for the analysis of LBLOCA at NAPS 1 and 2.

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,

Dr. V. Sreenivas, 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. 267 to NPF-4
2. Amendment No. 248 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. 267
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 October 21, 2010, as supplemented June 23 and August 22, 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. 267, 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

Nancy L. Salgado

Nancy L. Salgado, 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: February 29, 2012

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. 248
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 October 21, 2010, as supplemented June 23 and August 22, 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 in10 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. 248, 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

Nancy L. Salgado, 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: February 29, 2012

ATTACHMENT

TO LICENSE AMENDMENT NO. 267

RENEWED FACILITY OPERATING LICENSE NO. NPF-4

DOCKET NO. 50-338

AND

TO LICENSE AMENDMENT NO. 248

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	Insert Pages
Licenses	Licenses
License No. NPF-4, page 3	License No. NPF-4, page 3
License No. NPF-7, page 3	License No. NPF-7, page 3
TSs	TSs
5.6-4	5.6-4

(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. 267 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. 248 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

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

1. VEP-FRD-42-A, "Reload Nuclear Design Methodology."

2. Plant-specific adaptation of WCAP-16009-P-A, "Realistic Large Break LOCA Evaluation Methodology Using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)," as approved by NRC Safety Evaluation Report dated February 29, 2012.

3. WCAP-10054-P-A, "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code."

4. WCAP-10079-P-A, "NOTRUMP, A Nodal Transient Small Break and General Network Code."

5. WCAP-12610, "VANTAGE+ FUEL ASSEMBLY–REFERENCE CORE REPORT."

6. VEP-NE-2-A, "Statistical DNBR Evaluation Methodology."

7. WCAP-NE-1-A, "VEPCO Relaxed Power Distribution Control Methodology and Associated FQ Surveillance Technical Specifications."

8. WCAP-8745-P-A, "Design Bases for Thermal Overpower Delta-T and Thermal Overtemperature Delta-T Trip Function."

9. WCAP-14483-A, "Generic Methodology for Expanded Core Operating Limits Report."

10. BAW-10227P-A, "Evaluation of Advanced Cladding and Structural Material (M5) in PWR Reactor Fuel."

11. BAW-10199P-A, "The BWU Critical Heat Flux Correlations."

12. BAW-10170P-A, "Statistical Core Design for Mixing Vane Cores."

(continued)

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

b. (continued)

13. EMF-2103 (P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors." |

14. EMF-96-029 (P)(A), "Reactor Analysis System for PWRs." |

15. BAW-10168P-A, "RSG LOCA - BWNT Loss-of-Coolant Accident Evaluation Model for Recirculating Steam Generator Plants," Volume II only (SBLOCA models). |

16. DOM-NAF-2-A, "Reactor Core Thermal-Hydraulics Using the VIPRE-D Computer Code," including Appendix A, "Qualification of the F-ANP BWU CHF Correlations in the Dominion VIPRE-D Computer Code," and Appendix C, "Qualification of the Westinghouse WRB-2M CHF Correlation in the Dominion VIPRE-D Computer Code." |

17. WCAP-12610-P-A and CENPD-404-P-A, Addendum 1-A, "Optimized ZIRLO" (Westinghouse Proprietary). |

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.6 PAM Report

When a report is required by Condition B of LCO 3.3.3, "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 267

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-4

AND

AMENDMENT NO. 248

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-338 AND 50-339

1.0 INTRODUCTION

By application dated October 21, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102980447), as supplemented by letters dated June 23, 2011(ADAMS Accession No. ML111741323) and August 22, 2011 (ADAMS Accession No. ML11241A045), the Virginia Electric and Power Company (the licensee) requested an amendment to the Technical Specifications (TSs) for the North Anna Power Station, Units 1 and 2 (NAPS 1 and 2). The licensee proposed changes to include the Westinghouse Best Estimate Large Break Loss-of-coolant accident (BE-LBLOCA) analysis methodology using the Automated Statistical Treatment of Uncertainty Method (ASTRUM) for the analysis of LBLOCA (Reference 3) to the list of methodologies approved for reference in the Core Operating Limits Report (COLR) in TS 5.6.5.b. The licensee also requested to remove four obsolete COLR references that supported North Anna Improved Fuel (NAIF) product.

The supplements dated June 23, 2011 and August 22, 2011, contained clarifying information only and did not change the initial no significant hazards determination or expand the scope of the initial application.

2.0 REGULATORY EVALUATION

The U.S. Nuclear Regulatory Commission (NRC) staff considered the following regulatory requirements and guidance in its review of the proposed license amendment request (LAR).

Title 10 of the *Code of Federal* Regulations (10 CFR), Part 50 Section 92, "Issuance of Amendment," requires involvement of the material alternation of a licensed facility.

10 CFR 50.36, "Technical specifications," provides: (1) Safety limits, limiting safety system settings, and limiting control settings, (2) Limiting conditions for operation, (3) Surveillance requirements, (4) Design Features, (5) Administrative controls, (6) Decommissioning, (7) Initial notification, and (8) Written Reports.

10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," requires each boiling or pressurized light-water nuclear power reactor fueled with uranium oxide pellets within cylindrical zircaloy or ZIRLO cladding must be provided with an ECCS that must be designed so that its calculated cooling performance following postulated loss-of coolant accidents conforms to the criteria set forth in 10 CFR 50.46(b) including peak cladding temperature, maximum cladding oxidation, maximum hydrogen generation, coolable geometry, long-term cooling.

3.0 TECHNICAL EVALUATION

The technical review of the proposed LAR for NAPS 1 and 2 includes: (1) deleting the current TS COLR Methodologies 2, 3, 4, and 9; (2) adopting a new reference that reflects ASTRUM; and (3) renumbering TS COLR Methodologies 5-8 and 10-19 to 3-16.

3.1 TS 5.6.5 – Core Operating Limits Report (COLR)

The licensee proposed to replace the LBLOCA methodology listed in TS 5.6.5.b.4, WCAP-10266-P-A, "The 1981 Version of Westinghouse Evaluation Mode using BASH Code," with a new LBLOCA methodology described as Plant-specific adaption of WCAP-16009-P-A, "Realistic Large-Break LOCA Evaluation Methodology Using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)."

The WCAP describes a realistic (or best-estimate) Emergency Core Cooling Systems (ECCS) evaluation model for demonstrating plant compliance with 10 CFR 50.46 for postulated plant-specific LBLOCA transients. WCAP-16009-P-A uses a statistical approach in developing the peak cladding temperature (PCT), local maximum oxidation (LMO), and core wide oxidation (CWO) results at the 95th percentile. The ASTRUM methodology requires the execution of 124 transients to determine a bounding estimate of the 95th percentile of the PCT, LMO, and CWO parameters with 95% confidence level. These parameters are needed to satisfy 10 CFR 50.46 criteria.

A plant-specific adaption of the ASTRUM methodology was used for the new NAPS 1 and 2 analysis to better model the downcomer region by increasing the number of the circumferential noding stacks from three to nine (ADAMS Accession No. ML102980447). This finer nodalization has been assessed against experimental data and provided good overall agreement with the data. Reference 4 provides information to support applicability of the plant-specific adaption of WCAP-16009-P-A to NAPS LBLOCA analysis. The detailed radial noding of the vessel remains unchanged from the approved ASTRUM LBLOCA Evaluation Model and does not change the historically approved method for addressing downcomer boiling during reflood.

The staff performed an audit (ADAMS Accession No. ML111741223) of the validation package to support the application of a nine downcomer channel stack model to NAPS since the model in license amendment request (ADAMS Accession No. ML102980447) was never reviewed by

the staff for the deviation from a generic approval of the methodology. Significant interaction with the licensee was needed to clarify and resolve the issues relating to NAPS LBLOCA analysis with respect to: (1) nine downcomer channel stacks versus three and its sensitivity study on the impact of the lateral K-factor in the downcomer on the PCT; and (2) post-LOCA boric acid precipitation. The licensee provided supplemental information to support an NRC audit of the nine downcomer channel model validation and a formal response to the staff Request for Additional Information. Based on the review, the staff concludes that:

1. This review is only applicable to a plant-specific NAPS LBLOCA and not for a generic application without staff's review;

2. The results of the boric acid precipitation analysis that supports the NAPS power level of 2951 megawatts thermal were provided including basis for current analysis, calculation inputs and assumption, calculation results and margin, plant procedures, evaluation of flushing flow. Because this amendment change is in regard to the use of the ASTRUM methodology for BE-LBLOCA licensing evaluations, the staff did not perform an assessment or audit calculations to verify the results of the boric acid precipitation analyses at this time.

3. The reasoning for not using the Idelchick Handbook recommended expression for pressure loss coefficients is acceptable because its lateral loss in the downcomer is higher than that calculated from WCOBRA/TRAC for a 3-loop pressurized water reactor (PWR). A lower lateral loss in the downcomer will tend to exaggerate the ECCS bypass and liquid sweepout phenomena during a LBLOCA, which in-turn results in reduced vessel fluid inventory which is a conservative assumption;

4. The licensee's conclusion regarding the NAPS 1 and 2 sensitivity study on the impact of the lateral k-factor values on PCT during downcomer boiling following a LBLOCA remain in direct contrast to staff experience and past analysis results pertaining to downcomer boiling. While the staff understands the licensee analysis results and agrees that the current input assumptions and modeling technique maximizes PCT, evaluations with the existing more downcomer nodal detail and non-zero k-factors will continue to be essential to continue to demonstrate that the zero lateral k-factor assumption remains bounding. The staff intends to continue to pursue downcomer boiling behavior issues generically. Sufficient margin to the regulatory limits specified in 10 CFR 50.46(b) has been demonstrated in the NAPS 1 and 2 ASTRUM analyses to provide reasonable assurance of safe operation.

The NRC staff reviewed the proposed change to a previous approved methodology for LBLOCA analysis with a minor modification on the circumferential noding stacks in the downcomer region for NAPS, and found the plant-specific adaption of the ASTRUM methodology is acceptable for LBLOCA analysis for the NAPS application because the results shown in Tables 2 and 3 of the submittal (ADAMS Accession No. ML102980447) meet acceptable criteria prescribed in 10 CFR 50.46 based on NAPS major plant parameter assumptions. The staff also found that the proposed plant-specific adaption of WCAP-16009-P-A is acceptable to be listed in proposed COLR TS 5.6.5.b.2 because it will be used to support cycle-specific parameter listed in TS 3.2.1 – Heat Flux Hot Channel Factor.

With respect to the LBLOCA methodology review, the NRC staff concludes that the proposed replacement of LOCA methodology listed in TS 5.6.5.b.4, WCAP-10266-P-A, "The 1981 Version of Westinghouse Evaluation Mode using BASH Code," with a new LBLOCA methodology described as plant-specific adaption of WCAP-16009-P-A, "Realistic Large-Break LOCA Evaluation Methodology Using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)," is acceptable.

The ASTRUM methodology is impacted by the recently identified Thermal Conductivity Degradation (TCD) error. Based on the NRC staff's review of the audit documents the staff concludes that the predicted results are acceptable subject to requirements described in Section 3.2 below.

The staff also reviewed the proposed deletion of current TS COLR Methodologies 2, 3, 4 and 9 and renumbering TS COLR Methodologies 5-8 and 10-19 to 3-16 and found them acceptable because the proposed changes are administrative in nature.

3.2 Technical Summary and Conclusion

The NRC staff has reviewed the proposed LAR and concluded that the licensee's request is acceptable: (1) to delete TS 5.6.5.b.2, TS 5.6.5.b.3, TS 5.6.5.b.4, and TS 5.6.5.b.9 because of no longer in use; (2) to renumber TS 5.6.5.b.5 – 8 and TS 5.6.5.b.10 – 9 to TS 5.6.5.b.3 - 16 because the administrative in nature; and (3) to use a plant-specific adaption of WCAP-16009-P-A for LBLOCA analysis for NAPS because the results of the analysis meet the requirements specified in 10 CFR 50.46 based on major plant parameter assumptions.

With respect to the fuel TCD issue, the licensee is not requesting approval of the PAD4TCD model to support future cycles of NAPS. Instead the licensee is using this unapproved code to assess the impact of TCD on ECCS Performance, fuel mechanical design, and non-LOCA safety analyses. Currently approved Westinghouse methods will be maintained in the plants technical specifications. The audit documents the staff's preliminary review of the licensee's assessment of this non-conformance. In accordance with 10 CFR 50.46(a)(3) reporting requirements, the licensee will submit a 30-day notification following startup of the reactor. This report is expected to provide further detail and provide the opportunity for further interaction. This audit serves to provide a level of assurance that the units will startup and operate in accordance with Section 50.46(b) criteria and that the TCD related error, while significant (i.e. >50°F), does not pose an immediate risk to public health and safety. A further level of assurance is provided by the fact that all of the Westinghouse fuel is fresh and therefore not immediately impacted by TCD (which built with continued exposure).

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement 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 (75 FR 74097). 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 to be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The staff 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. Letter (10-575) from Leslie N. Hartz (Dominion) to U.S. NRC, "Virginia Electric and Power Company, North Anna Power Station Units 1 and 2, Proposed License Amendment Request (LAR) Addition of Analytical Methodology to COLR Best-Estimate Large Break Loss of Coolant Accident (BE-LBLOCA)," dated October 21, 2010 (ADAMS Accession No. ML102980447).

2. Letter (11-299) from J. Alan Price (Dominion) to U.S. NRC, "Virginia Electric and Power Company (Dominion), North Anna Power Station Units 1 and 2, Response to Request for Additional Information Proposed License Amendment Request (LAR) Addition of Analytical Methodology to COLR Best-Estimate Large Break Loss of Coolant Accident (BE-LBLOCA)," dated August 22, 2011 (ADAMS Accession No. ML11241A045).

3. SER on WCAP-16009-P-A, Revision 0, "Realistic Large-Break LOCA Evaluation Methodology Using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)," dated November 5, 2004.

4. Donald C. Cook Unit 1 – License Amendment Request Regarding Large Break Loss-of-Coolant Accident Analysis Methodology," December 27, 2007. (ADAMS Accession No. ML080090268).

5. Letter from J. Alan Price (Dominion) to U.S. NRC, "Virginia Electric and Power Company (Dominion), North Anna Power Station Units 1 and 2, Supplemental information to Support Proposed License Amendment Request (LAR), Addition of Analytical Methodology to COLR Best-Estimate Large Break Loss of Coolant Accident (BE-LBLOCA)," June 23, 2011 (Serial No. 11-346). (ADAMS Accession No. ML111741323)

6. Memorandum from Anthony. J. Mendiola (DSS) to Gloria J. Kulesa (DORL), "Regulatory Audit Report – Virginia Electric and Power Company North Anna Power Station Units 1 and 2 Proposed License Amendment Request for Addition of Analytical Methodology to COLR –

6. Memorandum from Anthony. J. Mendiola (DSS) to Gloria J. Kulesa (DORL), "Regulatory Audit Report – Virginia Electric and Power Company North Anna Power Station Units 1 and 2 Proposed License Amendment Request for Addition of Analytical Methodology to COLR – Fuel Transition (TAC Nos. ME4262, ME4263) and Addition of Analytical Methodology to COLR – Best Estimate LB LOCA (TAC NOs ME4933, ME4934)," US NRC, July 18, 2011. (ADAMS Accession No. ML111741223)

Principal Contributor: Tai L. Huang, NRR
Leonard Ward, NRR

Date: February 29, 2012

February 29, 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, UNITS 1 AND 2, ISSUANCE OF AMENDMENTS REGARDING ADDITION OF ANALYTICAL METHODOLOGY TO CORE OPERATING LIMITS REPORT FOR BEST ESTIMATE LARGE BREAK LOSS-OF-COOLANT ACCIDENT (TAC NOS. ME4933 AND ME4934)

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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/
Dr. V. Sreenivas, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
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Docket Nos. 50-338 and 50-339

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L. Ward, NRR/SNPB

ADAMS Accession No. ML12054A168

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NAME	VSreenivas	SFigueroa	AUlses	LSubin w/ comments	NSalgado	VSreenivas
DATE	02/27/12	02/27 /12	02/15/12	02/22/12	02/29/12	02/29 /12

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