

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

December 18, 2007

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

Serial No. 07-0794  
NLOS /ETS  
Docket Nos. 50-338/339  
License Nos. NPF-4/7

**VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)**  
**NORTH ANNA POWER STATION UNITS 1 AND 2**  
**SUBMITTAL OF ENGINEERING EVALUATION OF INSURGE/OUTSURGE**  
**TRANSIENTS ANALYSIS FOR THE PRESSURIZER SURGE LINE**

In a letter, dated January 3, 2007 (Serial No. 06-1007), as supplemented on March 13, 2007 (Serial No. 06-1007A), Dominion requested approval to use a proposed alternative to apply dissimilar metal weld overlays for repair/replacement activities associated with Alloy 600 materials. That request contained alternative requirements for the North Anna Units 1 and 2 Inservice Inspection (ISI) programs to perform full structural preemptive weld overlays (PWOLs) to mitigate the potential for primary water stress corrosion cracking (PWSCC) susceptibility for those pressurizer nozzles containing Alloy 600. In a May 16, 2007 letter (Serial No. 06-1007B), as requested by the NRC, Dominion provided the examination results for the six weld repairs, the final stress analysis for five of the weld overlays, and a preliminary engineering evaluation of insurge/outsurge transients for the surge line repair. Consistent with the relief request, Dominion is providing the final engineering evaluation of the insurge/outsuge transients for the surge lines in Attachment 1.

To conform to the requirements of 10 CFR 2.390 concerning the protection of proprietary information, the proprietary information provided in Attachment 1 is contained within brackets. Attachment 2 has been redacted to provide a non-proprietary version of the requested information. Where the proprietary information has been deleted in the non-proprietary version only the brackets remain (i.e., the information that was contained within the brackets in the proprietary version has been redacted). The basis for redacting certain information as proprietary is provided in the application for withholding and affidavit provided in Attachment 3, pursuant to 10 CFR 2.390(b)(1).

ADD1

NRB

If you have any questions regarding this submittal, please contact Mr. Thomas Shaub at (804) 273-2763.

Very truly yours,



Gerald T. Bischof  
Vice President – Nuclear Engineering

Attachments

1. Proprietary - Engineering Evaluations of the Insurge/Outsuge Transients for the Surge Line
2. Non-proprietary - Engineering Evaluations of the Insurge/Outsuge Transients for the Surge Line
3. Affidavit - Engineering Evaluations of the Insurge/Outsuge Transients for the Surge Line

Commitments made in this letter: None

cc: U.S. Nuclear Regulatory Commission (without attachments)

Region II  
Sam Nunn Atlanta Federal Center  
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Suite 23T85  
Atlanta, Georgia 30303

Mr. J. E. Reasor, Jr. (without attachments)  
Old Dominion Electric Cooperative  
Innsbrook Corporate Center  
4201 Dominion Blvd.  
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Glen Allen, Virginia 23060

Mr. J. T. Reece (without attachments)  
NRC Senior Resident Inspector  
North Anna Power Station

Mr. R. A. Jervey (without attachments)  
NRC Project Manager  
U. S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Mail Stop O-8 G9A  
Rockville, Maryland 20852

Mr. M. M. Grace (without attachments)  
Authorized Nuclear Insurance Inspector  
North Anna Power Station

Serial No. 07-0794  
Docket Nos. 50-338/339  
Weld Overlay Stress Analysis for Pressurizer Surge Line

**ATTACHMENT 1**

**PROPRIETARY**

**ENGINEERING EVALUATIONS OF THE INSURGE/OUTSUGE  
TRANSIENTS FOR THE PRESSURIZER SURGE LINE**

**32-9038239-002 – Surge Nozzle Analysis**  
**32-9042735-002 – Surge Nozzle Crack Growth Evaluation**

**NORTH ANNA POWER STATION UNITS 1 AND 2  
VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)**

**ATTACHMENT 3**

**AFFIDAVIT  
ENGINEERING EVALUATIONS OF THE INSURGE/OUTSUGE  
TRANSIENTS FOR THE PRESSURIZER SURGE LINE**

**32-9038239-002 – Surge Nozzle Analysis  
32-9042735-002 – Surge Nozzle Crack Growth Evaluation**

**NORTH ANNA POWER STATION UNITS 1 AND 2  
VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)**



requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information."

6. The following criteria are customarily applied by AREVA NP to determine whether information should be classified as proprietary:

- (a) The information reveals details of AREVA NP's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for AREVA NP.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA NP in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by AREVA NP, would be helpful to competitors to AREVA NP, and would likely cause substantial harm to the competitive position of AREVA NP.

The information in the Document is considered proprietary for the reasons set forth in paragraphs 6(b) and 6(c) above.

7. In accordance with AREVA NP's policies governing the protection and control of information, proprietary information contained in this Document have been made available, on a limited basis, to others outside AREVA NP only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA NP policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

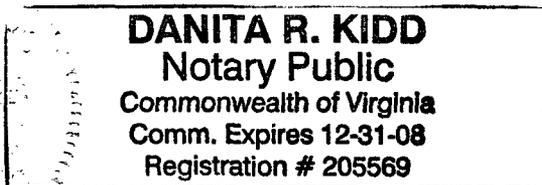
9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

A handwritten signature in black ink, appearing to be "D. Kidd", written over a horizontal line.

SUBSCRIBED before me this 13<sup>th</sup>  
day of December, 2007.

A handwritten signature in black ink that reads "Danita R. Kidd", written over a horizontal line.

Danita R. Kidd  
NOTARY PUBLIC, COMMONWEALTH OF VIRGINIA  
MY COMMISSION EXPIRES: 12/31/08  
Reg. #205569

A rectangular notary seal stamp with a double border. The text inside reads: "DANITA R. KIDD", "Notary Public", "Commonwealth of Virginia", "Comm. Expires 12-31-08", and "Registration # 205569". On the left side of the seal, the word "NOTARY" is printed vertically.

**DANITA R. KIDD**  
Notary Public  
Commonwealth of Virginia  
Comm. Expires 12-31-08  
Registration # 205569



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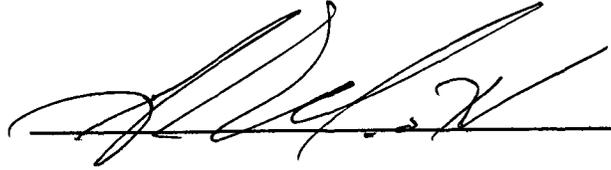
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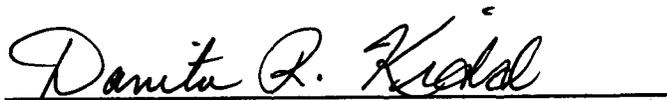
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<p><b>DANITA R. KIDD</b> <b>Notary Public</b> Commonwealth of Virginia Comm. Expires 12-31-08 Registration # 205569</p>
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**ATTACHMENT 2**

**NON-PROPRIETARY**

**ENGINEERING EVALUATIONS OF THE INSURGE/OUTSUGE  
TRANSIENTS FOR THE PRESSURIZER SURGE LINE**

**32-9049387-001 – Surge Nozzle Analysis**  
**32-9049433-001 – Surge Nozzle Crack Growth Evaluation**

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