



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

May 5, 2020

Mr. Daniel G. Stoddard  
Senior Vice President and Chief Nuclear Officer  
Innsbrook Technical Center  
5000 Dominion Blvd.  
Glen Allen, VA 23060-6711

SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2 AND SURRY POWER STATION, UNITS 1 AND 2 – CLOSEOUT OF NRC BULLETIN 2012-01, “DESIGN VULNERABILITY IN ELECTRIC POWER SYSTEM”

Dear Mr. Stoddard:

The purpose of this letter is to inform you that the U.S. Nuclear Regulatory Commission (NRC) staff has verified that North Anna Power Station (North Anna), Units 1 and 2, and Surry Power Station (Surry), Units 1 and 2 have provided the necessary information requested in NRC Bulletin (BL) 2012-01, “Design Vulnerability in Electric Power System,” (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12074A115) to close out the open phase condition (OPC) issue.

On July 27, 2012, the NRC issued BL 2012-01 and requested information about each facility’s electric power system designs. Specifically, the NRC requested licensees:

- describe how the protection scheme for Engineered Safety Features (ESF) buses (Class 1E for current operating plants or non-Class 1E for passive plants) is designed to detect and automatically respond to a single-phase open circuit condition or high impedance ground fault condition on offsite power circuits or another power source; and
- describe the the operating configuration of ESF buses (Class 1E for current operating plants or non-Class 1E for passive plants) at power (i.e., normal operating condition).

By letter dated October 24, 2012 (ADAMS Accession No. ML12305A017), Virginia Electric and Power Company (Dominion Energy Virginia, the licensee) responded to NRC BL 2012-01 for North Anna, Units 1 and 2, Surry, Units 1 and 2, Kewaunee Power Station, and Millstone Power Station, Units 2 and 3. Kewaunee Power Station has since permanently shutdown and no further review action is planned for that station. Millstone Power Station will be evaluated by a separate letter.

To address the OPC issue at North Anna and at Surry, the licensee submitted separate license amendment requests (LARs) for changes to the electric power systems at the respective sites.

Based on the licensee’s actions documented in the references below, the NRC staff concludes that Dominion Energy Virginia has adequately addressed the OPC issue discussed in BL 2012-01 for North Anna, Units 1 and 2, and for Surry, Units 1 and 2. Specifically, the NRC staff determined that the proposed detection and protection schemes for the 4160-volt

emergency buses at both the North Anna, Units 1 and 2, and Surry, Units 1 and 2, provide reasonable assurance that the safety-related equipment will be adequately protected from the consequences of OPCs; therefore, no further information or actions under the NRC BL 2012-01 are needed.

The following references pertain to the OPC issue for these two power stations:

- For North Anna:
  - LAR for changes to the North Anna, Units 1 and 2 Technical Specifications (TS) by application dated April 30, 2018 (ADAMS Accession No. ML18127A073), as supplemented by letters dated May 24 and August 8, 2019 (ADAMS Accession Nos. ML19156A207 and ML19225D130, respectively).
  - NRC letters dated September 12 and 25, 2019 regarding Amendment Nos. 282 and 265 to Renewed Facility Operating License Nos. NPF-4 and NPF-7 for the North Anna, Units 1 and 2, respectively (ADAMS Accession Nos. ML19238A127 and ML19261A078).
- For Surry:
  - LAR for changes to Surry, Units 1 and 2, TS by letter dated May 23, 2017 (ADAMS Accession No. ML17150A302), as supplemented by letters dated January 16 and March 14, 2018 (ADAMS Accession Nos. ML18023A403 and ML18075A328, respectively).
  - NRC letter dated May 3, 2018 regarding Amendment No. 292 to Renewed Facility Operating License No. DPR-32 and Amendment No. 292 to Renewed Facility Operating License No. DPR-37 for the Surry Power Station, Units 1 and 2, respectively (ADAMS Accession No. ML18106A007).

If you have any questions, please me at 301-415-2481 or via e-mail at [Ed.Miller@nrc.gov](mailto:Ed.Miller@nrc.gov).

Sincerely,

G. Edward Miller, Project Manager  
Plant Licensing Branch 2-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-338, 50-339, 50-280, and 50-281

cc: Listserv

SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2 AND SURRY POWER STATION, UNITS 1 AND 2 – CLOSEOUT OF BULLETIN 2012-01, “DESIGN VULNERABILITY IN ELECTRIC POWER SYSTEM” DATED MAY 5, 2020

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**ADAMS Accession No. ML20065L173**

**\*Via E-mail**

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