



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION II
245 PEACHTREE CENTER AVE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

July 30, 2020

EA-20-057

Mr. Daniel G. Stoddard
Senior Vice President and Chief Nuclear Officer
Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

**SUBJECT: SURRY POWER STATION – FINAL SIGNIFICANCE DETERMINATION OF A
WHITE FINDING AND NOTICE OF VIOLATION AND ASSESSMENT
FOLLOWUP LETTER; NRC INSPECTION REPORT 05000281/2020091**

Dear Mr. Stoddard:

This letter provides you the final significance determination of the preliminary White finding discussed in our previous communication dated June 26, 2020, NRC Inspection Report 05000281/2020090. The finding involved the failure of the Surry Power Station Unit 2 turbine-driven auxiliary feedwater (TDAFW) pump discharge check valve 2-FW-142, during surveillance testing. Specifically, Dominion Energy's Virginia Electric and Power Company did not analyze common failure or maintenance patterns to determine their significance and to identify potential failure mechanisms of the Unit 2 TDAFW pump discharge check valve when establishing its check valve condition monitoring program in accordance with the 2004 ASME Code for Operation and Maintenance (OM) of Nuclear Power Plants, Mandatory Appendix II. The condition also rendered the motor-driven auxiliary feedwater pumps unable to provide minimum required flow to the steam generators due to flow being bypassed via the TDAFW line. As a result, all three Unit 2 auxiliary feedwater pumps were declared inoperable, and the safety function was considered lost until the TDAFW line was isolated.

In a letter dated July 2, 2020, Mr. Fred Mladen of your staff indicated that Dominion Energy did not contest the characterization of the risk significance of this finding and that you declined your opportunity to discuss this issue in a Regulatory Conference or to provide a written response.

According to NRC Inspection Manual Chapter (IMC) 0609, appeal rights only apply to those licensees that have either attended a regulatory conference or submitted a written response to the preliminary determination letter.

The NRC has also determined that the failure of the Unit 2 TDAFW pump discharge check valve to meet the inservice test requirements set forth in the ASME OM Code, 2004 Edition is a violation of 10 CFR Part 50.55a(f)(4), as cited in the attached Notice of Violation (Notice). The circumstances surrounding the violation were described in detail in NRC Inspection

Report 05000281/2020090. In accordance with the NRC Enforcement Policy, the Notice is considered escalated enforcement action because it is associated with a White finding.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

For administrative purposes, this letter is issued as a separate NRC Inspection Report No. 05000281/2020091. Accordingly, apparent violation (AV) 05000281/2020090-01 is updated consistent with the regulatory positions described in this letter, as NOV 05000281/2020090-01 in the Mitigating Systems Cornerstone with a safety significance of White with no cross-cutting aspect.

The NRC has determined the performance at Surry Unit 2 would be in the Regulatory Response Column of the Reactor Oversight Process Action Matrix beginning 2nd Quarter of 2020 (April 1, 2020). Therefore, the NRC plans to conduct a supplemental inspection in accordance with Inspection Procedure (IP) 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area." This IP is conducted to provide assurance that the root and contributing causes for the performance issues are understood, and to provide assurance that the corrective actions are sufficient to address the root and contributing causes and prevent recurrence. This inspection will be scheduled after you notify the NRC of your readiness. This letter supplements, but does not supersede, the annual assessment letter issued on March 3, 2020.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA by Joel T. Munday for/

Laura A. Dudes
Regional Administrator

Docket No. 05000281
License No. DPR-37

Enclosure:
Notice of Violation

cc: Distribution via LISTSERV®

SUBJECT: SURRY POWER STATION – FINAL SIGNIFICANCE DETERMINATION OF A WHITE FINDING AND NOTICE OF VIOLATION AND ASSESSMENT FOLLOW-UP LETTER; NRC INSPECTION REPORT 05000281/2020091 DATED JULY 30, 2020

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DATE	7/12/2020	7/13/2020	7/13/2020	7/15/2020	7/15/2020	7/15/2020
OFFICE	RII: RC	RII:DRP	NRR	OE	RII:ORA	
NAME	S Price	T Inverso	C Miller	J Peralta	J Munday	
DATE	7/16/2020	7/15/2020	7/27/2020	7/23/2020	7/30/2020	

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NOTICE OF VIOLATION

Virginia Electric and Power Company
Surry Power Station Unit 2

Docket No. 05000281
License No. DPR-37
EA-20-057

During an NRC inspection conducted November 20, 2019, through May 13, 2020, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(f)(4) states, in part, "Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, pumps and valves that are within the scope of the ASME OM Code must meet the inservice test requirements (except design and access provisions) set forth in the ASME OM Code and addenda... ."

ASME OM Code, 2004 Edition (the Code of record for Surry Power Station Unit 2), Mandatory Appendix II, "Check Valve Condition Monitoring Program," subsection II-3000, states, in part, "The Owner shall perform an analysis of the test and maintenance history of a valve or group of valves in order to establish the basis for specifying inservice testing, examination, and preventive maintenance activities. The analysis shall include the following: Identify any common failure or maintenance patterns. Analyze these patterns to determine their significance and to identify potential failure mechanisms...."

Surry Power Station Technical Specification (TSs), 3.6.F.3, states in part, "With three auxiliary feedwater pumps inoperable, immediately initiate action to restore one inoperable pump to OPERABLE status. Specification 3.0.1 and all other required actions directing mode changes are suspended until one inoperable pump is restored to OPERABLE status."

Contrary to 10 CFR Part 50.55a(f)(4) above, from November 23, 2005, to November 20, 2019, the Unit 2 turbine-driven auxiliary feedwater (TDAFW) discharge check valve did not meet the inservice test requirements set forth in the ASME OM Code, 2004 Edition. Specifically, the analysis performed by the licensee of the test and maintenance history of the valve in order to establish the basis for specifying inservice testing, examination, and preventive maintenance activities did not identify known failure and maintenance patterns nor did the licensee analyze the known patterns to determine their significance and to identify potential failure mechanisms.

Consequently, contrary to Surry Power Station TS, 3.6.F.3 above, from October 28, 2019, (or earlier) to November 20, 2019, with three auxiliary feedwater pumps inoperable, the licensee did not immediately initiate action to restore one inoperable pump to OPERABLE status. Specifically, the result of the licensee not meeting the requirements of 10 CFR Part 50.55a(f)(4) above, was that the TDAFW discharge check valve disc assembly parts experienced excessive wear. This prevented the valve from checking shut during surveillance testing on October 28, 2019, and/or earlier, rendering all three auxiliary feedwater pumps inoperable. This condition was discovered during auxiliary feedwater check valve operability testing on November 20, 2019.

This violation is associated with a White Significance Determination Process finding.

Pursuant to the provisions of 10 CFR 2.201, Virginia Electric and Power Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory

Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation; EA-20-057" and should include for each violation: (1) the reason for the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 30th day of July 2020