VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

10CFR50.90

June 21, 2018

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Serial No.: 18-239
SPS/LIC-CGL: R0
Docket Nos.: 50-280/281
License Nos.: DPR-32/37

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
PROPOSED LICENSE AMENDMENT REQUEST
TEMPORARY, ONE-TIME 21-DAY ALLOWED OUTAGE TIME FOR REPLACEMENT OF RESERVE STATION SERVICE TRANSFORMER C AND ASSOCIATED CABLING
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

By letter dated November 7, 2017 (Serial No. 17-435), Virginia Electric and Power Company (Dominion Energy Virginia) submitted a license amendment request (LAR) to provide a temporary, one-time 21-day allowed outage time for replacement of Reserve Station Service Transformer C and associated cabling.

In a May 24, 2018 e-mail from Ms. Karen Cotton Gross (NRC Project Manager) to Mr. Gary Miller (Dominion Energy Virginia Nuclear Regulatory Affairs), the NRC technical staff requested additional information to facilitate their review of the proposed LAR. The NRC request and Dominion's response are provided in the attachment to this letter.

The information provided in this letter does not affect the conclusions of the significant hazards consideration or the environmental assessment included in the November 7, 2017 LAR.

Should you have any questions or require additional Information, please contact Mr. Gary D. Miller at (804) 273-2771.

Respectfully,

Mark D. Sartain
Vice President Nuclear Engineering and Fleet Support

VICKI L. HULL
NOTARY PUBLIC
REG. # 140542
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES 5/31/2022

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Mr. Mark D. Sartain, who is Vice President – Nuclear Engineering and Fleet Support, of Virginia Electric and Power Company. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 21ST day of June, 2018.

My Commission Expires: 5-31-2022.

Vicki L. Hull
Notary Public

ADD1
NRR

Commitments contained in this letter: None

Attachments:

1. Response to NRC Request for Additional Information Regarding the Proposed License Amendment Request – Temporary, One-time 21-day Allowed Outage Time for Replacement of Reserve Station Service Transformer C and Associated Cabling
2. AAC (Station Blackout) Diesel Corrective/Preventive Maintenance Procedures List

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NRC Senior Resident Inspector
Surry Power Station

Attachment 1

Response to NRC Request for Additional Information Regarding the Proposed License Amendment Request – Temporary, One-time 21-day Allowed Outage Time for Replacement of Reserve Station Service Transformer C and Associated Cabling

Virginia Electric and Power Company
(Dominion Energy Virginia)
Surry Station Units 1 and 2

RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION SURRY POWER STATION UNITS 1 AND 2

By letter dated November 7, 2017, (Agencywide Documents Access and Management System Accession No. ML17317A464), Dominion Energy Virginia submitted a license amendment request (LAR) for Surry Power Station Units 1 and 2. The proposed amendment would revise Technical Specification (TS) 3.16, "Emergency Power System," Action B.2, to allow a temporary, one-time, 21-day allowed outage time for the proposed replacement of the Reserve Station Service Transformer C (RSST C) and associated cabling. The NRC technical staff requested additional information to facilitate their review of the proposed LAR. The request for additional information (RAI) and Dominion's response are provided below.

NRC QUESTION EEOB RAI-1:

Section B of BTP 8-8 states, "A supplemental power source should be available as a backup to the inoperable EDG or offsite power source, to maintain the defense-in-depth design philosophy of the electrical system to meet its intended safety function."

In Section 2.4 of LAR, the licensee stated that during the 21-day AOT, the functionality of the AAC System shall be checked once per shift. If the AAC System becomes non-functional at any time during the 21-day AOT, it shall be restored to functional status within 24 hours, or the unit shall be brought to HOT SHUTDOWN within the next 6 hours and COLD SHUTDOWN within the following 30 hours."

The NRC staff finds that the LAR did not discuss any administrative controls or procedures that the licensee will use to restore AAC system to a functional status within 24 hours, if it became non-functional during the proposed 21-day AOT.

Provide a discussion of administrative controls or procedures that will be used to restore the AAC system to functional status within 24 hours if it became non-functional during the proposed 21-day AOT.

DOMINION RESPONSE:

If a failure of the Alternate AC (AAC) diesel/system occurs during the proposed temporary 21-day AOT, it will be identified either by Operations rounds performed once a shift using 0-LOG-OS-001R, *Outside Logs*, or by Main Control Room annunciator 0-WD-D2, *AAC System Alarm*. The Annunciator Response Procedure 0-WD-D2 would be used in conjunction with procedure 0-OP-AAC-002, *AAC System Alarm Response*, to address the condition. Procedure 0-OP-AAC-002 provides specific instructions for operator response to local alarms on the AAC Diesel Generator Annunciator Panel. Individual attachments provide diagnostic actions associated with individual AAC

system parameters to facilitate determination of the cause of the alarm and to initiate corrective actions.

A condition that renders the AAC diesel/system nonfunctional would be addressed based upon the nature of the failure. Numerous procedures provide guidance for responding to an AAC diesel/system failure. It is not anticipated that administrative controls would be used to restore the AAC diesel/system to functional status. Specifically, failure of the AAC diesel/system, as well as failure of supporting equipment (e.g., starting air, blackout lube oil, etc.), would be resolved by removing the affected component from service using procedure 0-MOP-AAC-001, *Removal from Service of the AAC Diesel Generator*, and completing the necessary repairs. Numerous corrective/preventive maintenance procedures exist and could be used to restore the functionality of the AAC diesel/system based upon the nature of the failure and the required repair. A list of these procedures is provided in Attachment 2.

Depending on the failure mode and required repair, functionality may be restored after repairs are completed and may not require additional testing. If additional testing is required, procedure 0-OSP-AAC-001, *Quarterly Test of 0-AAC-DG-0M, Alternate AC Diesel Generator*, or procedure 0-OP-AAC-001, *AAC Diesel Generator Operation*, would be used to demonstrate functionality. Following repairs, procedure 0-MOP-AAC-002, *Return to Service of the AAC Diesel Generator*, would be used for the return to service.

Additional procedures are also available to support the repair and return to service of a nonfunctional AAC diesel/system. Procedure ER-AA-EDG-1001, *Diesel Generator Reliability Program*, addresses the Emergency Diesel Generators (EDGs) and the AAC diesel/system and provides guidance regarding the initial response to a failure, including initiation of the quarantine, troubleshooting, and corrective maintenance processes. Procedure GMP-019, *AAC Diesel Failure Response and Troubleshooting Guideline*, also provides instructions for AAC diesel failure response and troubleshooting, including assessment of initial symptoms of the problem, obtaining vendor support, and review of previous failures for a synopsis of the failures and troubleshooting actions. While procedure MA-AA-DQT-1001, *Dominion Diesel Quality Team*, establishes guidance for proper preventive/predictive maintenance practices and scheduling/execution with a focus on improved EDG and AAC diesel reliability, it also includes information regarding the periodic review of potential EDG issues that could provide insights relative to an AAC diesel failure.

In summary, the nature of an AAC diesel/system failure will dictate the procedures and specific course of action required to restore AAC diesel/system functionality. As discussed above, there are numerous procedures available for reference and use in responding to an AAC diesel/system failure and restoring AAC diesel/system functionality.

Attachment 2

AAC (Station Blackout) Diesel Corrective/Preventive Maintenance Procedures List

Virginia Electric and Power Company
(Dominion Energy Virginia)
Surry Station Units 1 and 2

AAC (STATION BLACKOUT) DIESEL CORRECTIVE/PREVENTIVE MAINTENANCE PROCEDURES LIST SURRY POWER STATION UNITS 1 AND 2

As stated in Attachment 1, numerous AAC (station blackout) diesel corrective/preventive maintenance procedures exist and could be used to restore the functionality of the AAC diesel/system based upon the nature of the failure and the required repair. A list of these procedures is provided below:

- 0-DRP-SBO, *Station Blackout Diesel Instrumentation Setpoints, Ranges and Tolerances*
- 0-ECM-0705-01, *Station Blackout Diesel Maintenance*
- 0-ECM-0705-02, *AAC Diesel Voltage Regulator Replacement*
- 0-ECM-0708-06, *Field Adjustment of Station Blackout (SBO) Diesel Generator Governor Control System*
- 0-ECM-0708-08, *SBO Diesel Automatic Generator Loading Control (AGLC) Governor Control Module Maintenance*
- 0-ECM-0708-09, *Woodward 2301A Electronic Governor Control Module Maintenance*
- 0-ECM-0708-11, *SBO Diesel Generator Load Pulse Unit (LPU) Governor Control Module Maintenance*
- 0-EPM-0107-04, *SBO Battery Performance Test*
- 0-EPM-0109-05, *Station Blackout Diesel Battery Periodic Checks*
- 0-EPM-0705-01, *Station Blackout Diesel Preventive Maintenance*
- 0-EPM-0705-02, *Station Blackout Diesel Engine Speed Switch (ESS) Replacement - Calibration - Functional Test*
- 0-EPM-1807-08, *Circuit Breaker 05L1 AAC Bus 0L To Transfer Bus E Tie Breaker Relay Maintenance*
- 0-EPM-1807-09, *Circuit Breaker 05L2 AAC Bus 0L Feeder Breaker to 0M Bus Relay Maintenance*
- 0-EPM-1807-10, *Circuit Breaker 05L3 AAC Bus 0L to Transfer Bus D Tie Breaker Relay Maintenance*
- 0-EPM-1807-11, *AAC 0L Bus Differential and Voltage Balance Relay Maintenance*
- 0-EPM-1807-12, *Circuit Breaker 05M1 AAC Feeder Breaker from Transformer 0M1 Relay Maintenance*
- 0-EPM-1807-14, *Circuit Breaker 05M3 AAC Feeder Breaker to Bus 0L Relay Maintenance*

- 0-EPM-1807-15, *Circuit Breaker 05M4 AAC Generator Output Breaker to Bus 0M Relay Maintenance*
- 0-EPM-1807-16, *AAC 0M Bus Differential and Voltage Balance Relay Maintenance*
- 0-EPM-1807-17, *AAC 0M1 Bus Undervoltage Monitoring Relay Maintenance*
- 0-EPM-1807-18, *AAC Generator Differential Relay Maintenance*
- 0-EPM-1807-19, *AAC Generator Protective Relay Maintenance*
- 0-EPM-1807-20, *AAC Generator Synchronizing Relay Maintenance*
- 0-IPM-AAC-OCM-001, *Station Blackout Diesel Modicon Modem Reboot*
- 0-IPM-AAC-PLC-001, *Station Blackout Diesel Modicon PLC Monitoring*
- 0-IPM-AAC-PLC-002, *Station Blackout Diesel GE Fanuc PLC Monitoring*
- 0-MCM-0750-04, *Repair of Caterpillar Station Black-Out Diesel Injector*
- 0-MCM-0750-06, *Repair of Station Black-Out Diesel Start Air Pressure Reduction Valve*
- 0-MPM-0221-03, *Atlas Copco SBO Diesel Air Start Compressor Service and Inspection*
- 0-MPM-0750-02, *Caterpillar Station Black-Out Diesel Service And Inspection*