VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

October 5, 2022

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

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Docket Nos.: 50-280
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License Nos.: DPR-32
DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
ANNUAL SUBMITTAL OF TECHNICAL SPECIFICATIONS BASES CHANGES
PURSUANT TO TECHNICAL SPECIFICATION 6.4.J

Pursuant to Technical Specification 6.4.J, "Technical Specifications (TS) Bases Control Program," Dominion Energy Virginia hereby submits changes to the Bases of the Surry Power Station TS implemented between October 1, 2021, and September 30, 2022.

Bases changes to the TS that were not previously submitted to the NRC as part of a License Amendment Request were reviewed and approved by the Facility Safety Review Committee (FSRC). It was determined that the changes did not require a revision to the TS or operating licenses, nor did the changes involve a revision to the Updated Final Safety Analysis Report (UFSAR) or Bases that required Nuclear Regulatory Commission (NRC) prior approval pursuant to 10 CFR 50.59. These changes have been incorporated into the TS Bases. A summary of these changes is provided in Attachment 1.

TS Bases changes that were submitted to the NRC for information along with associated License Amendment Request transmittals, submitted pursuant to 10CFR50.90, were also reviewed and approved by the FSRC. These changes have been implemented with the respective License Amendments. A summary of these changes is provided in Attachment 2.

Current TS Bases pages reflecting the changes discussed in Attachments 1 and 2 are provided in Attachment 3.

If you have any questions regarding this transmittal, please contact Stephen C. Newman, Surry Power Station Licensing Group at (757) 365-3397.

Sincerely,

James D. Shell
Director Station Safety and Licensing
Surry Power Station

Attachments:

1. Summary of TS Bases Changes Not Previously Submitted to the NRC
2. Summary of TS Bases Changes Associated with License Amendments [none]
3. Changed/Current TS Bases Pages

Commitments made in this letter: None

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NRC Senior Resident Inspector
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Attachment 1

Summary of TS Bases Changes Not Previously Submitted to the NRC

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

Technical Specifications Basis (TSB) Change Request Number 472

As a clarifying enhancement, this TSB change revised the Bases for TS 3.4 and TS 3.8 to increase the containment depressurization profile following a Loss of Coolant Accident (LOCA) and was a follow-up activity associated with previously implemented Technical Specification Amendments (TSA) 306/306. TSA 306/306 updated the LOCA alternate source term radiological dose analysis bases to increase the assumed containment depressurization profile and to reduce refueling water storage tank backleakage in support of the low-head safety injection net positive suction head margin recovery effort and the chemical addition tank removal project.

Attachment 2

Summary of TS Bases Changes Associated with License Amendments

[NONE]

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

Attachment 3

Changed/Current TS Bases Pages

[TS Bases pages 3.4-3 and 3.8-5]

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

Basis

The spray systems in each reactor unit consist of two separate parallel Containment Spray Subsystems, each of 100 percent capacity, and four separate parallel Recirculation Spray Subsystems, each of 50 percent capacity.

Each Containment Spray Subsystem draws water independently from the refueling water storage tank (RWST). The water in the tank is cooled to 45°F or below by circulating the water through one of the two RWST coolers with one of the two recirculating pumps. The water temperature is maintained by two mechanical refrigerating units as required. In each Containment Spray Subsystem, the water flows from the tank through an electric motor driven containment spray pump and is sprayed into the containment atmosphere through two separate sets of spray nozzles. The capacity of the spray systems to depressurize the containment in the event of a Design Basis Accident is a function of the pressure and temperature of the containment atmosphere, the service water temperature, and the temperature in the refueling water storage tank as discussed in the Basis of Specification 3.8.

Each Recirculation Spray Subsystem draws water from the common containment sump. In each subsystem the water flows through a recirculation spray pump and recirculation spray cooler, and is sprayed into the containment atmosphere through a separate set of spray nozzles. Two of the recirculation spray pumps are located inside the containment and two outside the containment in the containment auxiliary structure.

With one Containment Spray Subsystem and two Recirculation Spray Subsystems operating together, the spray systems are capable of cooling and depressurizing the containment to 2.0 psig in less than 60 minutes and to subatmospheric pressure within 6 hours following the Design Basis Accident. The Recirculation Spray Subsystems are capable of maintaining subatmospheric pressure in the containment indefinitely following the Design Basis Accident when used in conjunction with the Containment Vacuum System to remove any long term air inleakage. The radiological consequences analysis demonstrates acceptable results provided the containment pressure does not exceed 2.0 psig (from 1 hour to 6 hours) and is maintained less than 0.0 psig (after 6 hours).

If the containment air partial pressure rises to a point above the allowable value the reactor shall be brought to the HOT SHUTDOWN condition. If a LOCA occurs at the time the containment air partial pressure is at the maximum allowable value, the maximum containment pressure will be less than design pressure (45 psig), the containment will depressurize to 2.0 psig within 1 hour and less than 0.0 psig within 6 hours. The radiological consequences analysis demonstrates acceptable results provided the containment pressure does not exceed 2.0 psig for the interval from 1 to 6 hours following the Design Basis Accident.

If the containment air partial pressure cannot be maintained greater than or equal to the minimum pressure in Figure 3.8-1, the reactor shall be brought to the HOT SHUTDOWN condition. The shell and dome plate liner of the containment are capable of withstanding an internal pressure as low as 3 psia, and the bottom mat liner is capable of withstanding an internal pressure as low as 8 psia.

References

UFSAR Section 4.2.2.4	Reactor Coolant Pump
UFSAR Section 5.2	Containment Isolation
UFSAR Section 5.2.1	Design Bases
UFSAR Section 5.2.2	Isolation Design
UFSAR Section 5.3.4	Containment Vacuum System