

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

March 21, 2022

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No. 22-042
NAPS/RAP
Docket Nos. 50-338, 339
License Nos. NPF-4, NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION ENERGY VIRGINIA)
NORTH ANNA POWER STATION UNITS 1 AND 2
SUMMARY OF FACILITY CHANGES, TESTS AND EXPERIMENTS

Pursuant to 10 CFR 50.59(d)(2), a report containing a brief description of any changes, tests, and experiments, including a summary of the evaluation of each, must be submitted to the NRC, at intervals not to exceed 24 months. Attachment 1 provides a summary description of Facility Changes, Tests and Experiments identified in 10 CFR 50.59 Evaluations performed at the North Anna Power Station during 2021.

If you have any questions, please contact Marcus A. Hofmann at (540) 894-2100.

Very truly yours,



Lisa Hilbert
Site Vice President

Commitments made in the letter: None

Attachments

1. 10 CFR 50.59 Summary Description of Facility Changes, Tests and Experiments
2. Commitment Change Evaluation Summary

cc: Regional Administrator
United States Nuclear Regulatory Commission
Region II
Marquis One Tower
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, Georgia 30303-1257

NRC Senior Resident Inspector
North Anna Power Station

IE 47
NRR

ATTACHMENT 1

**10 CFR 50.59 SUMMARY DESCRIPTION OF
FACILITY CHANGES, TESTS AND EXPERIMENTS**

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

NORTH ANNA UNITS 1 AND 2

10 CFR 50.59 SUMMARY DESCRIPTION OF FACILITY CHANGES, TESTS AND EXPERIMENTS

10 CFR 50.59 Evaluation – Document Evaluated: NAPS-UCR-2020-016 Rev. 0 and TRCR 198

Brief Description: This activity is in support of a Technical Requirements Manual (TRM) Change Request (TRCR) to reduce the frequency of site settlement surveying. The Updated Final Safety Analysis Report (UFSAR) also required an update as a result of the TRM change.

Reason for Change: The purpose of the TRM change and associated UFSAR change is to support reducing the site settlement surveying frequency from once per six months to once per twelve months. Based on a review of historical data, it has been determined that the twelve month frequency is sufficient to identify unacceptable settlement and still provide adequate time to initiate corrective actions.

Summary: Class 1 Structures are currently monitored for settlement on a six month frequency as required by TRM 3.7.7. TRM 3.7.7 has been revised to allow settlement monitoring to be conducted at twelve month intervals instead of the current six month interval. ETE-NA-2020-0015 was prepared to document the technical basis for this decision based on review of past survey data.

Settlement of the affected Class 1 structures has the potential to impact functionality of Safety-Related SSCs. Per review of NEI 96-07 a 50.59 Evaluation is required when adjusting a surveillance frequency for a design function of an SSC.

As discussed above the decrease in survey frequency will not increase the probability or severity of any accident evaluated in the SAR. The rate of settlement has sufficiently slowed such that twelve months between surveys will be sufficient to identify any adverse settlement before allowable settlement limits are reached.

10 CFR 50.59 Evaluation – Document Evaluated: ETE-NAF-2020-0104 Rev. 0 and NAPS-UCR-2020-014

Brief Description: The activity being reviewed is the implementation of topical report PWROG-17034-P-A into UFSAR Section 6.2.1.1.1.3, "LOCA Mass and Energy Release" as described in ETE-NAF-2020-0104, Revision 0. PWROG-17034-P-A confirms the continued applicability of the WCAP-10325-P-A methodology despite the issue identified in InfoGram 14-1 of the material properties associated with the stainless steel thermal conductors. The activity involves an update to the North Anna Units 1 and 2 UFSAR to include PWROG-17034-P-A as a reference in Sections 6.2.1.1.1.3 and 6.2 (References).

Reason for Change: The purpose of this Engineering Technical Evaluation (ETE) is to implement the supplemental analysis contained in PWROG-17034-P-A into North Anna Units 1 and 2 design and licensing basis containment response analysis. Westinghouse informed Dominion Energy via InfoGram 14-1 of a non-conservative value of heat capacity of stainless steel used in the development of WCAP-10325-P-A. The non-conservatism potentially impacts the Large Break Loss of Coolant Accident (LBLOCA) Mass and Energy (M&E) data and initial conditions used in the Dominion Energy GOTHIC-based Topical Report DOM-NAF-3-0.0-P-A methodology for prediction of post-reflood containment conditions. The supplemental analysis in PWROG-17034-P-A confirmed the continued applicability of the existing WCAP-10325-P-A methodology for use in LOCA M&E analyses.

Summary: The activity is the implementation of topical report PWROG-17034-P-A which supplements the LOCA mass and energy release methodology documented in WCAP-10325-P-A. The activity is limited to the change in method of evaluation for the generation of mass and energy releases to containment following a LOCA and support UFSAR Section 6.2.1.1.1.3.

PWROG-17034-P-A was approved by the NRC with two Conditions and Limitations. The first restriction is to ensure NSAL-06-6, NSAL-11-5 and NSAL-14-2 have been addressed. The second condition limits the approval to large dry and/or sub-atmospheric containment designs. Both of these Conditions and Limitations are met for North Anna Units 1 and 2. The activity does not result in a departure from a method of evaluation described in the SAR. Therefore, the 10 CFR 50.59 evaluation concluded that prior NRC approval is not required for this activity.

ATTACHMENT 2

Commitment Change Evaluation Summary

None in 2021.

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