NORTH ANNA POWER STATION, UNITS 1 AND 2 (NAPS)

SUBSEQUENT LICENSE RENEWAL APPLICATION (SLRA)

REQUESTS FOR CONFORMATION OF INFORMATION (RCIS)

SAFETY - SET 1

RCI No.	Description	Dominion Energy's Response
B2.1.27-A	Based on the review of procedure 0-EPM-2303-01, “Inspection of Service Water Cathodic Protection System,” Revision 15, the staff noted that the acceptance range for instant-off potentials includes an upper bound of -1,200 mV. During its audit, the staff reviewed the previous revision of procedure 0-EPM 2303 01 (i.e., Revision 14) and noted the acceptance range for instant-off potentials included an upper bound of -1,500 mV. Confirm that Revision 15 of procedure 0 EPM 2303 01 includes a limiting critical potential of -1,200 mV.	
B2.1.27-B	Based on the review of NAS 74, “Yard Water and Fire Protection Systems for North Anna Power Station,” Revision 4, the staff noted that buried fire protection piping is cast iron with a cement mortar lining and bituminous coating. Confirm that in scope buried gray cast iron piping is specified to be externally coated with a bituminous coating.	
B2.1.27-C	Based on the review of Design Change No. 04-018, “Underground Fire Protection Piping Replacement/ North Anna, Units 1&2,” dated May 18, 2006, the staff noted that buried ductile iron fire protection lines are coated with an asphaltic exterior coating. Confirm that in scope buried ductile iron piping is specified to be externally coated with an asphaltic coating.	
B2.1.27-D	Based on the review of 11715-FV-46A-8, “Underground Fuel Oil Storage Tanks I EG TK 2A & 2B,” Revision 8, the staff noted buried fuel oil storage tanks are externally coated with a minimum of 16 mils of Koppers Bitumastic 300-M or equal. Confirm that in scope buried steel tanks exposed to soil are specified to be externally coated with “Koppers Bitumastic 300-M or equal.”	

RCI No.	Description	Dominion Energy's Response
B2.1.27-E	As amended by letter dated February 4, 2021, Enhancement No. 3 for the Buried and Underground Piping and Tanks program states the following: The following buried piping materials will be replaced before the last five years of the inspection period prior to entering the subsequent period of extended operation. (Added – Supplement 1): (a) the buried copper piping between the fire protection jockey pump and the hydropneumatic tank will be replaced with carbon steel; and (b) the buried carbon steel fill line piping for the security diesel fuel oil tank will be replaced with corrosion resistant material that does not require inspection (e.g., titanium alloy, super austenitic, or nickel alloy materials). Confirm the following: (1) that the piping referenced in part (a) is the only in-scope (within scope of subsequent licensing renewal) buried copper alloy piping; and (2) that the piping referenced in part (b) is the only in scope (within scope of subsequent licensing renewal) buried steel piping in the security system.	
B2.1.34-A	Based on the audit review of ER-NA-INS-1047, Revision 10, "Monitoring of Structures North Anna Power Station," the staff verified that the component referenced as "valve body" in SLRA Table 3.5.2-15, "Structures and Components Supports – Flood Protection Dike – Aging Management Evaluation," is included in the inspection of component reference as "steel culvert" in Attachment 6 of ER-NA-INS-104, "List of Earthen Structures." Attachment 6 of ER-NA-INS-104 states that the "steel culvert" associated with the flood wall west of Turbine Building is inspected in accordance with Procedure 1-PT-9.3. Procedure 1-PT-9.3 indicates that exposed portions of the drainpipe and valves associated with the flood wall are inspected. Confirm that the component referenced as "valve body" in SLRA Table 3.5.2-15, "Structures and Component Supports – Flood	

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	Protection Dike – Aging Management Evaluation," is included in the inspection of the component referenced as "steel culvert" in Attachment 6 of ER-NA-INS-104, "List of Earthen Structures."	
TLAA 4.7.4-A	Based on the audit review of Calculation 11715-NMB-282-FC, Revision 0, Addendum 00B, "Thermal Stress Analysis of Fuel Pool Liner – Fuel Pool Liner Fatigue Evaluation for 80 Years Plant Life, NAPS Units 1 & 2" and supporting referenced Calculation CE-1272, Revision 0, "Analysis of Surry Fuel Pool Liner at 212 Degrees Fahrenheit," the staff noted that Dominion calculated the limiting cumulative damage (or cumulative usage factor) due to fatigue effects of thermal cyclic loadings for the controlling component (i.e., plate-stiffener weld) of the SFP liner from the three design conditions described in the SLRA to be 0.75. This is less than the acceptance criterion of 1.0. Confirm that the limiting cumulative damage (or cumulative usage factor) due to fatigue effects of thermal cyclic loadings calculated for the controlling component (i.e., plate-stiffener weld) of the SFP liner from the three design conditions described in SLRA Section 4.7.4 to be 0.75.	
3.5.2.2.2.6-A	Based on the audit review of ETE-SLR-2020-2204, "Assessment of Radiation Effects on Reactor Vessel Supports for NAPS Units 1 & 2," Revision 0, the staff noted that the observed difference in critical stress values for Cases 2 and 4 in ETE-SLR-2020-2204 are small and that Case 2 bounds Case 3, and that Case 4 was analyzed as a quality check for the effect of higher levels of irradiation (reflected by the 62.9 ski yield stress) on the values of critical stress and that Cases 3 and 4 need not be included in SLRA Section 3.5.2.2.2.6. - Confirm that observed difference in critical stress values for Cases 2 and 4 in ETE-SLR-2020-2204 are small - Confirm that Case 2 bounds Case 3 - Confirm that Case 4 was analyzed as a quality check for the effect of higher levels of irradiation (reflected by the 62.9 ksi yield stress) on the values of critical stress	

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	- Confirm that Cases 3 and 4 need not be included in SLRA Section 3.5.2.2.2.6.	
3.5.2.2.2.6-B	Based on the audit review of ETE-SLR-2020-2204, “Assessment of Radiation Effects on Reactor Vessel Supports for NAPS Units 1 & 2,” Revision 0, the staff noted that the inner surface flaw analyzed in Table 1 is for a flaw that that has a depth of 1/4T; and stresses in Figures 1 through 4 of ETE-SLR-2020-2204 was back calculated from the applied stress intensity factor (K) set equal to KIC and that the critical stress in Table 1 of SLRA Section 3.5.2.2.2.6 came from these plots. - Confirm that the inner surface flaw analyzed in Table 1 is for a flaw that that has a depth of 1/4T - Confirm stresses in Figures 1 through 4 of ETE-SLR-2020-2204 was back calculated from the applied stress intensity factor (K) set equal to KIC - Confirm that the critical stress in Table 1 of SLRA Section 3.5.2.2.2.6 came from these plots.	