John Klos

From: John Klos
Sent: Friday, December 09, 2022 8:13 AM
To: gary.d.miller@dominionenergy.com; craig.d.sly@dominionenergy.com
Cc: John Klos
Subject: Verbal Authorization of Relief Request Surry Unit 1, ALTERNATIVE REQUEST V-01, ALTERNATIVE MECHANICAL AGITATION PROCESS FOR PRESSURE ISOLATION valve 1-SI-241

Gary, Craig,

By telephone conversation on December 9, 2022, the U.S. Nuclear Regulatory Commission (NRC) staff provided a verbal authorization to Virginia Electric and Power Company, (the licensee, Dominion Energy Virginia) for the proposed alternative V-01 for Surry Unit 1.

The staff's evaluation and verbal authorization is repeated below as an attachment to this email. This email will be recorded as an official agency record and made publicly available.

Thanks in advance,

John Klos
DORL Mcguire, Surry Licensing Project Manager
U.S. NRC, Office of Nuclear Reactor Regulation (NRR),
Division of Operating Reactor Licensing (DORL),
NRC/NRR/DORL/LPL2-1, MS O9E3
Washington, DC 20555-0001
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Attachment:

VERBAL AUTHORIZATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION FOR

ALTERNATIVE REQUEST V-01

ALTERNATIVE MECHANICAL AGITATION PROCESS FOR PRESSURE ISOLATION

VALVE 1-SI-241 SEAT LEAKAGE TESTING

VIRGINIA ELECTRIC AND POWER COMPANY

SURRY UNIT 1 DOCKET NO. 50-380

DECEMBER 9, 2022

Technical Evaluation Read by Stewart Bailey, Chief, Mechanical Engineering and

Inservice Testing Branch, Division of Engineering and External Hazards,

NRC Office of Nuclear Reactor Regulation

This call is for the NRC to verbally authorize a request by Virginia Electric and Power Company (the licensee, Dominion Energy Virginia) to use an alternative to certain inservice testing (IST) requirements of the ASME *Code for Operation and Maintenance of Nuclear Power Plants* (ASME OM Code) at Surry Power Station Unit 1. In particular, the licensee submitted Alternative Request V-01 by letter dated December 8, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22342B248) as supplemented by letter dated December 9, 2022 (ADAMS Accession No. ML22343A000) proposing a mechanical agitation process for pressure isolation valve 1-SI-241, which is the Low Head Safety Injection to Reactor Coolant System cold leg isolation check valve, to assist in achieving acceptable seat leakage test results in lieu of meeting specific inservice testing requirements in the ASME OM Code at Surry Unit 1.

Title 10 of the *Code of Federal Regulations*, Section 50.55a, permits the NRC staff to verbally authorize alternatives to IST requirements in circumstances where the licensee has docketed all pertinent information, the NRC staff has completed its review, and there is not enough time for the NRC to issue its written safety evaluation before the alternative is needed. That is the case here.

The licensee submitted Alternative Request V-01 in accordance with 10 CFR 50.55a(z)(2) on the basis that the applicable inservice testing requirements to address potential valve seat leakage for 1-SI-241 during startup from the current refueling outage would cause a hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The NRC regulations in 10 CFR 50.55a(f) require licensees to implement inservice testing programs for pumps, valves, and dynamic restraints that meet the requirements of the ASME OM Code as incorporated by reference in 10 CFR 50.55a. The current ASME OM Code of Record for Surry Unit 1 is the 2004 Edition through the 2006 Addenda. The ASME OM Code requirements applicable to Alternative Request V-01 include ASME OM Code, Subsection ISTC, paragraphs ISTC-3630, ISTC-3630(a), ISTC-3630(f), ISTC-5221(a)(1), and ISTC-5224.

In its review of Alternative Request V-01, the NRC staff evaluated (1) the licensee's description of the mechanical agitation process previously performed and planned in the future for 1-SI-241 at Surry Unit 1, (2) the controls specified for the 1-SI-241 mechanical agitation process, (3) the operational history of seat leakage

for 1-SI-241, (4) past performance of mechanical agitation of 1-SI-241 to the reduce its seat leakage, (5) the licensee's engineering assessment of the stress applied to the valve body of 1-SI-241 from mechanical agitation, and (6) the licensee's comparison of its process for mechanical agitation of 1-SI-241 to the mechanical agitation process specified in the precedent that Dominion Electric Virginia referenced in the submittal. The precedent is a similar alternative request that the NRC staff has already authorized for another licensee.

In response to NRC staff questions, the licensee supplemented Alternative Request V-01 in a letter dated December 9, 2022, as follows:

1. Dominion Energy Virginia confirms that PIV 1-SI-241 will be internally inspected and repaired or replaced prior to startup from the next SPS Unit 1 RFO (1R32). The licensee specified this action as a regulatory commitment in its letter dated December 9, 2022.

2. The Dominion Energy Virginia engineering evaluation documents that 1-SI-241 is the same make/model as the 6" check valve evaluated by TVA (same thickness, same material) and that the results from the TVA analysis therefore apply to 1-SI-241 assuming mechanical agitation is performed applying the same approach, which is required by the proposed alternative. Therefore, Dominion Energy Virginia confirms that the results of our engineering evaluation demonstrate that mechanical agitation will not damage 1-SI-241.

3. Dominion Energy Virginia confirms that the mechanical agitation of 1-SI-241 at SPS Unit 1 will implement the process specified in the Alternative Request V-01 section titled "Recommendations for Future Application of Mechanical Agitation to Seat Valve 1-SI-241." The licensee specified this action as a regulatory commitment in its letter dated December 9, 2022.

Based on the information provided by the licensee, the NRC staff finds that a hardship exists without a compensating increase in the level of quality and safety, in accordance with 10 CFR 50.55a(z)(2), for the performance of the specified inservice testing requirements in the ASME OM Code for 1-SI-241 during startup from the current refueling outage. With the mechanical agitation process described in the licensee's request, the NRC finds that the licensee's proposed alternative will provide reasonable assurance that 1-SI-241 at Surry Unit 1 will be operationally ready to perform its safety function until corrective action can be performed during the next refueling outage. The NRC staff does not authorize Alternative Request V-01 beyond the current operating cycle. It is only authorized up to the next refueling outage for Surry Unit 1.

All other ASME OM Code requirements for which relief or an alternative was not specifically requested and granted or authorized as part of this alternative request remain applicable. If the licensee identifies a performance issue with 1-SI-241, the licensee will be expected to take action to implement the requirements of its Technical Specifications. This Verbal Authorization is applicable to Alternative Request V-01 until the next refueling outage at Surry Unit 1. The NRC staff's detailed review of Alternative Request V-01 for Surry Unit 1 will be provided through a separate safety evaluation.

NRC Staff Conclusion Read by Michael Markley, Chief, Plant Licensing Branch II-1,

Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation

As Chief of Plant Licensing Branch II-1, I concur with the conclusions of the NRR Mechanical Engineering and Inservice Testing Branch.

The NRC staff concludes that Alternative Request V-01 addresses the identified hardship or unusual difficulty without a compensating increase in the level of quality and safety for the Surry Power Station Unit 1 for the 1-SI-241 valve.

Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(2) for the 1-SI-241 valve.

Therefore, as of December 9, 2022, the NRC authorizes Alternative Request V-01 for Surry Unit 1 for the next operating cycle to end in the spring of 2024.

All other requirements of the ASME OM Code, for which relief or an alternative was not specifically requested and authorized by the NRC staff, remain applicable.

This verbal authorization does not preclude the NRC staff from asking additional questions and clarifications regarding the licensee's proposed alternative while preparing the subsequent written safety evaluation.