

From: [Audrey Klett](#)
To: [Smith, Derek](#)
Subject: NRC Request for Additional Information re. Susquehanna Relief Request RR-01 (EPID L-2023-LLR-0043)
Date: Thursday, November 30, 2023 11:47:00 AM
Attachments: [RAI for Susquehanna RR-01 \(L-2023-LLR-0043\).docx](#)

Hi Derek,

Attached is a request for additional information (RAI) for the subject proposed alternative. As discussed earlier today, the NRC staff is requesting Susquehanna to respond to the RAI on or by January 5, 2024.

Thanks,

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Office of Nuclear Reactor Regulation
Division of Operating Reactor Licensing
Plant Licensing Branch 1
301-415-0489

**Request for Additional Information
Relief [Alternative] Request RR-01
Proposed Alternative for Excess Flow Check Valves
Fifth 10-year Interval Inservice Testing Program
Susquehanna Steam Electric Station, Units 1 and 2
Docket Nos. 50-387 and 50-388
EPID L-2023-LLR-0043**

Background

By a letter dated August 3, 2023 (Agencywide Documents Access and Management System Accession No. ML23215A173), Susquehanna Nuclear, LLC (the licensee) submitted Relief Request RR-01 (a proposed alternative) regarding certain inservice testing (IST) requirements of the 2020 Edition of the American Society of Mechanical Engineers (ASME) *Operation and Maintenance of Nuclear Power Plants*, Division 1, OM Code: Section IST (OM Code) for the Fifth 10-Year Interval IST Program at Susquehanna Steam Electric Station, Units 1 and 2 (Susquehanna). Although the licensee titled this request as a relief request, the request is a proposed alternative under 10 CFR 50.55a(z).

The licensee proposed an alternative to the testing requirements of ASME OM Code, Subsection ISTC, paragraphs ISTC-3522(c) and ISTC-3700, and 10 CFR 50.55a(b)(3)(xi), for affected components on the basis that the alternative testing would provide an acceptable level of quality and safety under 10 CFR 50.55a(z)(1). The affected components are excess flow check valves (EFCVs), which are instrumentation line valves that penetrate primary containment. In its submittal, the licensee notes that testing the subject valves quarterly or during cold shutdown is not practicable based on plant conditions.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided by the licensee in its submittal and has determined that the staff needs the following additional information to complete its review of the proposed alternative. As discussed with licensee staff on November 30, 2023, NRC is requesting the licensee to respond to the request for additional information (RAI) on or by January 5, 2024.

Regulatory Requirements

The regulations in Title 10 of the *Code of Federal Regulations*, Section 50.55a, "Codes and standards," paragraph (z), "Alternatives to codes and standards requirements," state the following:

Alternatives to the requirements of paragraphs (b) through (h) of this section or portions thereof may be used when authorized by the Director, Office of Nuclear Reactor Regulation. A proposed alternative must be submitted and authorized prior to implementation. The applicant or licensee must demonstrate that:

(1) *Acceptable level of quality and safety.* The proposed alternative would provide an acceptable level of quality and safety; or

(2) *Hardship without a compensating increase in quality and safety.* Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Request for Additional Information

EMIB-RAI-1

In its submittal, the licensee cited the NRC safety evaluation dated March 11, 2022 (ML22061A040), which authorized an alternative for EFCVs at Nine Mile Point Unit 2, as a precedent. That NRC safety evaluation states the Nine Mile Point Unit 2 request specified that any failed valves will be tested during the next refueling outage. However, the licensee's request for Susquehanna does not discuss the provisions for testing failed valves at the next refueling outage.

The NRC staff requests that the licensee describe in more specificity the actions it would take if an EFCV fails its test and whether the licensee would test the valve during the next refueling outage (and if not, why not).

EMIB-RAI-2:

In its submittal, the licensee cited the NRC safety evaluation dated March 11, 2022 (ML22061A040), which authorized an alternative for EFCVs at Nine Mile Point Unit 2, as a precedent. The safety evaluation states:

Under proposed Alternative Request GV-RR-10, Nine Mile Point 2 EFCVs *will be tested on a representative sampling basis of approximately 20 percent every refueling outage*, and all EFCVs will be tested at least once within a 10-year interval. [emphasis added]

In its submittal, the licensee discusses that it would implement a sampling plan and that EFCVs would be tested on a representative sampling basis in accordance with TS SR 3.6.1.3.9 (which requires the licensee to verify a representative sample of EFCVs actuate to check flow on a simulated instrument line break in accordance with the surveillance frequency control program), such that each EFCV will be tested at least once every 10 years.

The NRC staff requests that the licensee further describe the sampling of EFCVs for testing during each refueling outage (e.g., discuss the approximate percentage of valves that would be tested each refueling outage).

EMIB-RAI-3

In Relief Request RR-01, the licensee references General Electric Boiling Water Reactor Owners Group (BWROG) Topical Report NEDO-32977-A/821-00658-01, "Excess Flow Check Valve Testing Relaxation," June 2000 (ML003729011). The NRC staff reviewed NEDO-32977-A and issued a safety evaluation on March 14, 2000 (ML003691722), which concluded that the topical report was acceptable for referencing in relaxation of EFCV surveillance testing, subject to certain conditions specified in section 4.0, "Conclusion," of the safety evaluation. The licensee for Nine Mile Point Unit 2 addressed those conditions in its RAI response dated November 15, 2021 (ML21320A049).

The NRC staff requests that the licensee describe its actions to address the conditions specified in the safety evaluation dated March 14, 2000, for the acceptability of BWROG NEDO-32977-A to support Relief Request RR-01.