

From: Mahesh Chawla
Sent: Friday, June 14, 2024 7:39 PM
To: Garcia, Richard M.
Cc: Collis, Tracey M.; Gurjendra Bedi; Thomas Scarbrough; Stewart Bailey
Subject: Final Request for Additional Information - Columbia Generating Station (Columbia) - Relief Requests for the Fifth Ten-Year Interval Inservice Testing - EPIDs (L-2024-LLR-007 through 0013)
Attachments: Columbia RAIs for RRs for Pumps 5IST-01 thru 03_Final_061324.docx; Columbia RAIs for Valves 5IST-04 thru 5IST-07_Final_061324.docx

Dear Mr. Garcia,

By letter dated January 29, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML2409A071), Energy Northwest (the licensee), submitted seven relief requests, pursuant to 10 CFR 50.55a(z)(1), 10 CFR 50.55a(z)(2), and 10 CFR 50.55a(f)(5)(iii). The licensee requested U.S. Nuclear Regulatory Commission (NRC) approval of the relief requests for the upcoming Fifth Ten-Year Inservice Testing (IST) Program at Columbia Generating Station (Columbia). The licensee requested relief due to alternatives providing an acceptable level of quality and safety, determination that complying with the requirements would result in a hardship or unusual difficulty without a compensating increase in the level of quality and safety, and impracticality of conformance with certain IST Code requirements.

After reviewing the Licensee's request, the NRC staff determined that additional information was required to complete its review. The application contains three RRs for pumps, and four RRs for the valves. The attached RAIs were sent on 6/3/24, as draft request for additional information (RAI) and were separated in two sections for the pumps and valves identified in the application.

A follow up telephone call was held with Energy Northwest on 6/11/24, during which the NRC staff provided further clarification to the licensee regarding the requested draft information. There was no need to modify any of the RAIs or RCIs. Therefore, the requested information is now being retransmitted as the final RAIs and RCIs. The licensee requested a time period of 45 days and agreed to provide their response on the docket by July 29, 2024. Thanks

Mahesh Chawla, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Phone: 301-415-8371

Docket No. 50-397

DORL/LPL4/PM	DORL/LPL4/BC
MChawla	JRankin
6/13/24	6/14/24

Hearing Identifier: NRR_DRMA
Email Number: 2520

Mail Envelope Properties (SJ0PR09MB10405E5671CC290622EB53B2BF1C22)

Subject: Final Request for Additional Information - Columbia Generating Station (Columbia) - Relief Requests for the Fifth Ten-Year Interval Inservice Testing - EPIDs (L-2024-LLR-007 through 0013)

Sent Date: 6/14/2024 7:38:31 PM

Received Date: 6/14/2024 7:38:00 PM

From: Mahesh Chawla

Created By: Mahesh.Chawla@nrc.gov

Recipients:

"Collis, Tracey M." <tmcollis@energy-northwest.com>

Tracking Status: None

"Gurjendra Bedi" <Gurjendra.Bedi@nrc.gov>

Tracking Status: None

"Thomas Scarbrough" <Thomas.Scarbrough@nrc.gov>

Tracking Status: None

"Stewart Bailey" <Stewart.Bailey@nrc.gov>

Tracking Status: None

"Garcia, Richard M." <rmgarcia@energy-northwest.com>

Tracking Status: None

Post Office: SJ0PR09MB10405.namprd09.prod.outlook.com

Files	Size	Date & Time	
MESSAGE	2011	6/14/2024 7:38:00 PM	
Columbia RAIs for RRs for Pumps 5IST-01 thru 03_Final_061324.docx			33865
Columbia RAIs for Valves 5IST-04 thru 5IST-07_Final_061324.docx			33973

Options

Priority: Normal

Return Notification: No

Reply Requested: No

Sensitivity: Normal

Expiration Date:

REQUEST FOR ADDITIONAL INFORMATION
ALTERNATIVE REQUESTS 5IST-01 (RP01), 5IST-02 (RP02), AND 5IST-03 (RP03)
FIFTH INTERVAL INSERVICE TESTING PROGRAM
COLUMBIA GENERATING STATION
ENERGY NORTHWEST
DOCKET NO. 50-397
EPID L-2024-LLR-0007, 0009, AND 0010

Background

By letter dated January 29, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML24029A071), Energy Northwest (the licensee) submitted Alternative Requests 5IST-01 (RP01), 5IST-02 (RP02), and 5IST-03 (RP03), to the U.S. Nuclear Regulatory Commission (NRC) proposing the use of an alternative to specific pump testing requirements in 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) at Columbia Generating Station (Columbia) associated with the Fifth Interval Inservice Testing (IST) Program in accordance with 10 CFR 50.55a, paragraph (z).

Regulatory Requirements

The NRC regulations in 10 CFR 50.55a(f)(4), *Inservice testing standards requirement for operating plants*, state, in part, that throughout the service life of a boiling or pressurized water-cooled nuclear power facility, pumps and valves that are within the scope of the ASME OM Code must meet the inservice test requirements (except design and access provisions) set forth in the ASME OM Code and addenda that become effective subsequent to editions and addenda specified in paragraphs 10 CFR 50.55a(f)(2) and (3) and that are incorporated by reference in paragraph 10 CFR 50.55a(a)(1)(iv), to the extent practical within the limitations of design, geometry, and materials of construction of the components.

The NRC regulations in 10 CFR 50.55a(z), *Alternatives to codes and standards requirements*, state:

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.

Requests for Additional Information

EMIB-RAI-5IST-01/02/03-General

In Alternative Requests 5IST-01 (RP01) /5IST-02 (RP02) /5IST-03 (RP03), Section 7, “Precedent,” the licensee references the previous Alternative Request RP01, RP02, RP03 for the Fourth 10-Year Interval IST Program, which applied to various applicable pumps. The referenced precedent provided details regarding Quality/Safety Impact and the discharge pressure for the proposed alternative.

The licensee is requested to discuss the quality/safety impact to support Alternative Request 5IST-01 (RP01) / 5IST-02 (RP02) /5IST (RO03) for various applicable pumps for the Fifth 10-Year Interval IST Program at Columbia.

EMIB-RAI-5IST-01-01

In Alternative Request 5IST-01 (RP01), Section 7, “Precedent,” the previous Alternative Request RP01 for the Fourth 10-Year Interval IST Program was related to Preservice, Group A, and Comprehensive tests for pumps SW-P-1A, SW-P-1B and HPCS-P-2 at Columbia. Alternative Request 5IST-01 (RP01) for Fifth Interval IST Program at Columbia is based on the ASME OM Code, 2020 Edition, as incorporated by reference in 10 CFR 50.55a. Alternative Request 5IST-01 (RP01), Section 3, “Applicable Code Requirements,” references ASME OM Code, Subsection ISTB, paragraphs ISTB-5210, “Baseline Testing,” and ISTB-5221, “Group A Test Procedure,” as applicable to this request.

The licensee is requested to specify its plans to meet the ASME OM Code, Subsection ISTB, paragraph ISTB-5223, “Comprehensive Test Procedure,” requirements during the Fifth Interval IST Program for the applicable pumps at Columbia.

EMIB-RAI-5IST-01-02

Alternative Request 5IST-01 (RP01) applies to pumps SW-P-1A, SW-P-1B, and HPCS-P-2 at Columbia. These pumps are vertical line shaft centrifugal pumps. The ASME OM Code, 2020 Edition, Subsection ISTB, includes requirements in paragraph ISTB-5224, “Periodic Verification Test,” for this pump type.

The licensee is requested to specify its plans to meet the ASME OM Code, Subsection ISTB, paragraph ISTB-5224, requirements for pumps SW-P-1A, SW-P-1B and HPCS-P-2 at Columbia.

EMIB-RAI-5IST-02-01

Alternative Request 5IST-02 (RP02), Section 4, “Reason for Request,” in the last sentence states that “Temporary test gauges meeting the [ASME] OM Code requirements shall be used for comprehensive and preservice tests.”

ASME OM Code, 2020 Edition, Subsection ISTB, does not refer to “preservice tests.” Further, Subsection ISTB contains paragraphs ISTB-5210, “Baseline Testing,” and ISTB-5224, “Periodic Verification Test.”

The licensee is requested to (1) clarify these differences between the submittal and the ASME OM Code, and (2) specify its plans to meet the requirements in paragraphs ISTB-5210 and ISTB-5224 for pumps RHR-P-2A/2B/2C and HPCS-P-1 listed in the Alternative Request 5IST-02 (RP02).

EMIB-RAI-5IST-02-02

Alternative Request 5IST-02 (RP02), Section 5, “Proposed Alternative and Basis for Use,” in the table in Subsection 5.2 in the Reference Value column for pump HPCS-P-1 specifies 448.2 pounds per square inch gauge (psig) (differential pressure dP) and corresponding “Instrument Loop Accuracy,” column shows instrument loop accuracy of ± 15 psig.

The licensee is requested to explain the basis and acceptability of instrument loop accuracy of ± 15 psig for the reference value to 448.2 psig (dP).

EMIB-RAI-5IST-02-03

Alternative Request 5IST-02 (RP02) in the table in Subsection 5.2 in the Equivalent Code Accuracy column for pump RHR-P-2A apparently should be 1.40 percent rather than 1.47 percent.

Please verify the calculation error.

EMIB-RAI-5IST-03-01

Alternative Request 5IST-03 (RP03), Section 3, “Applicable Code Requirements,” in the last sentence states that “Relief is required for Group B, and comprehensive and preservice tests.” ASME OM Code, 2020 Edition, Subsection ISTB, does not refer to “preservice tests.” Further, Subsection ISTB contains paragraphs ISTB-5210, “Baseline Testing,” and ISTB-5224, “Periodic Verification Test.”

The licensee is requested to (1) clarify these differences between the submittal and the ASME OM Code, and (2) specify its plans to meet the requirements in paragraphs ISTB-5210 and ISTB-5224 for pumps SLC-P-1A and SLC-P-1B listed in Alternative Request 5IST-03 (RP03).

EMIB-RAI-5IST-03-02

Alternative Request 5IST-03 (RP03), Section 5, “Proposed Alternative and Basis for Use,” second paragraph, in the first two sentences, states:

Pump flow rate will be determined by measuring the volume of fluid pumped and dividing by the corresponding pump run time. The volume of fluid pumped will be determined by the difference in fluid level in the test tank at the beginning and end of the pump run (test tank fluid level corresponds to volume of fluid in the tank).

However, the title of Alternative Request 5IST-03 (RP03) is “RP03: Elimination of Two-Minute Hold Time.”

The licensee is requested to (1) clarify the difference between the title and the discussion in Section 5, and (2) explain the reason that the alternative applies to the 2-minute hold time and not for the use of the test tank, as discussed in NUREG-1482, Revision 3, Section 5.5.2.

REQUEST FOR CONFIRMATION OF INFORMATION AND
REQUEST FOR ADDITIONAL INFORMATION
ALTERNATIVE REQUESTS 5IST-04 (RV01), 5IST-05 (RV02), 5IST-06 (RV03) AND
5IST-07 (RV04)
FIFTH INTERVAL INSERVICE TESTING PROGRAM
COLUMBIA GENERATING STATION
ENERGY NORTHWEST
DOCKET NO. 50-397
EPID L-2024-LLR-0008, 0011, 0012 AND 0013

Background

By letter dated January 29, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML24029A071), Energy Northwest (the licensee) submitted Alternative Requests 5IST-04 (RV01), 5IST-05 (RV02), 5IST-06 (RV03), and 5IST-07 (RV04) to the U.S. Nuclear Regulatory Commission (NRC) proposing the use of an alternative to specific requirements in 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) at Columbia Generating Station (Columbia) associated with the Fifth Interval Inservice Testing (IST) Program in accordance with 10 CFR 50.55a, paragraph (z)(1) or (f)(5).

Regulatory Requirements

The NRC regulations in 10 CFR 50.55a(f)(4), *Inservice testing standards requirement for operating plants*, state, in part, that throughout the service life of a boiling or pressurized water-cooled nuclear power facility, pumps and valves that are within the scope of the ASME OM Code must meet the inservice test requirements (except design and access provisions) set forth in the ASME OM Code and addenda that become effective subsequent to editions and addenda specified in paragraphs 10 CFR 50.55a(f)(2) and (3) and that are incorporated by reference in paragraph 10 CFR 50.55a(a)(1)(iv), to the extent practical within the limitations of design, geometry, and materials of construction of the components.

The NRC regulations in 10 CFR 50.55a(z), *Alternatives to codes and standards requirements*, state:

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.

The NRC regulations in 10 CFR 50.55a(f)(5)(iii) require that, if a licensee has determined that conformance with certain Code requirements is impractical for its facility, the licensee shall notify the Commission and submit information to support the determination.

The NRC regulations in 10 CFR 50.55a(f)(6)(i) state, in part, that the Commission will evaluate determinations, under paragraph 10 CFR 50.55a(f)(5), that Code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest, giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

Request for Confirmation of Information (RCI)

EMIB-RCI-5IST-04-01

Alternative Request 5IST-04 (RV01), Section 5, "Proposed Alternative and Basis for Use," first paragraph, states that "these valves will be leak tested in accordance with CGS [Columbia] TS [Technical Specification] SR [Surveillance Requirement] 3.6.1.1.2, SR 3.6.1.1.3, and SR 3.6.1.1.4 during refueling outages." Section 5 of the alternative request then summarizes the specific test frequencies required by these TS SRs. The NRC staff notes that the current Columbia TS 3.6.1.1.2, SR 3.6.1.1.3, and SR 3.6.1.1.4, require a leak test frequency in accordance with the Surveillance Frequency Control Program (SFCP).

RCI-04-01

The licensee is requested to confirm that these valves shall be leak tested in accordance with the authorized Alternative Request 5IST-04 (RV01) in lieu of the SFCP frequency.

EMIB-RCI-5IST-04-02

Alternative Request 5IST-04 (RV01), Section 5, last paragraph states: "These valves are also verified-closed by position indicators (per TS SR 3.6.1.7.1, ISTC-3700, and I-3370(a)), exercised (per TS SR 3.6.1.7.2, ISTC-3520, and I-3370(a)), and tested in the open direction per TS SR 3.6.1.7.3, ISTC-5221(b), and I- 3370(a). In accordance with station procedures, the valves are visually inspected each refueling outage."

The staff notes that the current Columbia TS SR 3.6.1.7.1, SR 3.6.1.7.2, and SR 3.6.1.7.3 require that the valves be verified-closed by position indication, exercised, and tested in open direction at a frequency in accordance with the SFCP.

RCI-04-02

The licensee is requested to confirm that that these valves shall be tested in accordance with the Alternative Request 5IST-04 (RV01) in lieu of the SFCP frequency.

EMIB-RCI-5IST-04-03

The staff notes that the Columbia Fourth 10-Year Interval IST Program Plan (ML15113A503), IST Table, Remark Column for Valves CVB-V-1AB, CD, EF, GH, JK, LM, NP, QR, ST, references "TV03." The description of the Technical Position TV03 (printed page 135 of 188) provides the following SRs for vacuum breakers:

1. SR 3.6.1.7.1: verify each vacuum breaker is closed every 14 days.
2. SR 3.6.1.7.2: perform a functional test of each required vacuum breaker every 31 days and within 12 hours after any discharge of steam to the suppression chamber from the safety/relief valves.
3. SR 3.6.1.7.3: verify the full open setpoint of each required vacuum breaker is less than or equal to 0.5 psid every 24 months.

The IST Program Plan then states that position indicators are verified operable during performance of the above surveillances.

RCI-04-03

The licensee is requested to confirm that the valves will satisfy the test frequency proposed in Alternative Request 5IST-04 (RV01), and whether any adjustments will be need to the current TS SRs, and TV03 of the Columbia Fifth 10 Year Interval IST Program.

Request for Additional Information (RAI)

EMIB-RAI-5IST-04/05/06/07-01

Alternative Request 5IST-04/05/06/07, Section 7, "Precedent," references the previous similar Alternative Requests RV01/RV02/RV03/RV04 for the Fourth 10-Year Interval IST Program, which described the Quality/Safety Impact for that alternative request. The Proposed Alternative Requests 5IST-04/05/06/07 for the Fifth 10-Year Interval IST Program do not describe the Quality/Safety Impact of this alternative request.

The licensee is requested to describe the Quality/Safety Impact to support Alternative Requests 5IST-04/05/06/07 as described in the Precedent of Section 7, of the submittal.

EMIB-RAI-5IST-05-01

Alternative Request 5IST-05 (RV02), Section 3, "Applicable Code Requirements," lists ASME OM Code, Subsection ISTC, paragraph ISTC-5150, "Solenoid-Operated Valves," as applicable to the scope of this alternative request.

The licensee is requested to address whether ASME OM Code, paragraph ISTC-3700, "Position Verification Testing," as supplemented by 10 CFR 50.55a(b)(3)(xi), "OM condition: Valve Position Indication," is included within the scope of this alternative request.

EMIB-RAI-5IST-07-01

Alternative Request 5IST-07 (RV04), Section 5, "Proposed Alternative and Basis for Use," includes three paragraphs. The second paragraph in Section 5 references an approved license amendment dated February 20, 2001, which allows EFCV testing frequencies as 24 months per approved TS SR 3.6.1.3.8. The NRC staff notes that the 24-month frequency for EFCV testing, which was approved for TS SR 3.6.1.3.8 via a letter dated February 26, 2001, has been deleted and replaced with the SFCP in the current Columbia TS.

TS Section 5.5, "Program and Manuals," TS Section 5.5.15, "Surveillance Frequency Control Program," paragraph b, states that changes to the frequencies listed in the SFCP shall be made in accordance with NEI 04-01, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.

- a. The licensee is requested to clarify the relationship between the EFCV testing frequency requirements and the provisions of Alternative Request 5IST-07 (RV04).
- b. The licensee is requested to clarify the relationship between the SFCP for the EFCV testing frequencies and the provisions in Alternative Request 5IST-07 (RV04).
- c. Based on the information in the third paragraph, the licensee is requested to describe whether this information regarding the SFCP, NEI 04-01, FSAR, and license amendment request dated February 26, 2001, will affect the provisions in Alternative Request 5IST-07 (RV04).
- d. The third paragraph states, in part, that "there have only been three EFCV failures within the CGS EFCV population since 1985." However, the precedent section in Columbia Alternative Request RV04 for the Fourth 10-Year IST Program (page 39 of 40) (ML14101A365) refers to 15 years of testing (up to the year 2000) with only one failure, and no failures since the year 2000.

The submitted Alternative Request 5IST-07 states three failure since 1985 vs Alternative Request RV04 for Fourth 10-Year IST Program states only one failure since the year 2000. The licensee is requested to provide valve failure history provided in the current alternative requests.