

From: Mahesh Chawla
Sent: Thursday, August 1, 2024 4:04 PM
To: Garcia, Richard M.
Cc: Keith Miller; michael norris; Devin Bradshaw; Jeffrey Rikhoff; Jennie Rankin; Jessie Quichocho; Anthony Shelton
Subject: Final Request for Additional Information - Columbia Generating Station - License Amendment Request to Revise Emergency Plan - EPID: L-2024-LLA-0011
Attachments: RAI-10258-R1-FINAL.docx

Dear Mr. Garcia,

By letter dated January 30, 2024 (Agencywide Documents Access and Management System Accession No. ML24030A844), as supplemented by letter dated March 20, 2024 (ML24081A193), Energy Northwest, requested changes to the Columbia Generating Station (Columbia or CGS) Emergency Plans for U.S. Nuclear Regulatory Commission (Commission, NRC) review and prior approval pursuant to Section 50.54(q) of Title 10 of the *Code of Federal Regulations* (10 CFR). Specifically, the proposed changes to the Columbia Emergency Plan were developed utilizing the guidance in NUREG-0654/FEMA REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 2, dated December 2019 (ML19347D139). During review of the subject application, the NRC staff has identified additional information, which needs to be addressed, to complete the review. The draft request for additional information was provided in an attachment to an email sent on July 29, 2024.

A clarification call was held with the NRC staff on August 1, 2024. The clarification call did not result in any changes to the draft RAI. The licensee requested 45 days to provide response to the subject request, which was found acceptable by the NRC staff to meet the scheduled completion of the project. In a call later, Rick Garcia of Energy Northwest agreed to provide response to the RAI on the docket no later than September 16, 2024. In case of any further questions/concerns, please contact me. Thanks

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REQUEST FOR ADDITIONAL INFORMATION
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
COLUMBIA, LICENSE AMENDMENT REQUEST TO REVISE EMERGENCY PLAN
ENERGY NORTHWEST
COLUMBIA GENERATING STATION, UNIT 2
DOCKET NO. 05000397
ISSUE DATE: N/A

Background

By letter dated January 30, 2024 (Agencywide Documents Access and Management System Accession No. ML24030A844), as supplemented by letter dated March 20, 2024 (ML24081A193), Energy Northwest, requested changes to the Columbia Generating Station (Columbia or CGS) Emergency Plans for U.S. Nuclear Regulatory Commission (Commission, NRC) review and prior approval pursuant to Section 50.54(q) of Title 10 of the *Code of Federal Regulations* (10 CFR). Specifically, the proposed changes to the Columbia Emergency Plan were developed utilizing the guidance in NUREG-0654/FEMA REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 2, dated December 2019 (ML19347D139).

The following requests for additional information (RAI) is needed for the NRC staff to complete its review.

RAI 1

Requirement:

- 10 CFR 50.47(b)(2) requires on-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.
- The licensee has adopted NUREG-0654 Rev. 2. Associated guidance in NUREG-0654, Section II.B, Evaluation Criterion B.1 states that the emergency plan specifies how the requirements of 10 CFR 50.47(b)(2) and the applicable sections of Appendix E to 10 CFR Part 50 are met.

Issue: In the original submittal dated January 30, 2024, Section 3.1.4, "[*Deviation 1-4*] On-Shift Chemistry Technician Position Removed," of Enclosure 1, "*Evaluation of Proposed Changes*," states,

The current Emergency Plan assigns one on-shift Chemistry Technician to a Nuclear Chemistry function based on compliance with NUREG-0654/FEMA-REP-1, Revision 1. The proposed Emergency Plan does not use the Chemistry Technician to perform ERO tasks or functions. This change aligns the proposed Emergency Plan with the NUREG-0654/FEMA-REP-1, Revision 2, staffing plan guidance.

However, Section O.1.8, “*Repair and Damage Control Team Personnel*,” Enclosure 2, “*Columbia Generating Station Emergency Plan*,” states:

Operations, maintenance, **chemistry** and radiation protection personnel who would be assigned to repair and damage control teams receive required emergency plan training as part of their normal job-specific training program. [Emphasis added for Clarity]

Section 3.1.4 of Enclosure 1 is contrary to Section O.1.8 of Enclosure 2 and there is no discussion of how the current functions being performed by the Chemistry Technician are still be accomplished by the proposed ERO.

Request: Please address this discrepancy between the sections and provide technical justification for the removal of the on-shift and augmenting Chemistry Technicians from the proposed Table B-1, “*On-Shift and Augmenting ERO Staffing Plan*.” Specifically what emergency plan functions do the on-shift and augmenting Chemistry Technicians currently perform and how are these functions performed in the proposed emergency plan?

RAI 2

Requirement:

- 10 CFR 50.47(b)(2) requires on-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.
- The licensee has adopted NUREG-0654 Rev. 2. Associated guidance in NUREG-0654, Section II.B, Evaluation Criterion B.1 states that the emergency plan specifies how the requirements of 10 CFR 50.47(b)(2) and the applicable sections of Appendix E to 10 CFR Part 50 are met.

Issue: In the original submittal dated January 30, 2024, Section 3.1.6, “*[Deviation 1-6] Minimum Staff Technical and Operations Manager Positions Removed*,” of Enclosure 1, “*Evaluation of Proposed Changes*,” states,

NUREG-0654/FEMA-REP-1, Revision 2 does not assign minimum staff Operations or Technical Manager ERO positions to the Engineering function.

The current Emergency Plan assigns minimum staff Operations Manager and Technical Manager ERO positions at the Alert emergency classification level to the Engineering function. The proposed Emergency Plan retains a non-minimum staff Operations Manager ERO Position and eliminates the Technical Manager ERO position.

The Technical Manager ERO position, having an Engineering background, was responsible for analysis of plant data and the development of plans and procedures in direct support of Operations personnel. This position supervised the analysis of plant safety parameters by the plant technical and Operations staff. There is no site-specific basis that requires the Technical Manager as a minimum staff ERO position.

With the elimination of the Technical Manager ERO position, there is no technical justification on how the currently assigned position's functions are being continued by the proposed ERO changes.

Request: Provide technical justification for the removal of the augmenting Technical Manager position from the proposed Table B-1, "*On-Shift and Augmenting ERO Staffing Plan*." Specifically what emergency plan functions does the Technical Manager currently perform and how are these functions performed in the proposed emergency plan?

RAI 3

Requirement:

- 10 CFR 50.47(b)(2) requires on-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.
- The licensee has adopted NUREG-0654 Rev. 2. Associated guidance in NUREG-0654, Section II.B, Evaluation Criterion B.1 states that the emergency plan specifies how the requirements of 10 CFR 50.47(b)(2) and the applicable sections of Appendix E to 10 CFR Part 50 are met.

Issue: In the original submittal dated January 30, 2024, Section 3.2.7, "[*Deviation 2-7*] *Radiation Protection Personnel at 90 Minutes*," of Enclosure 1 states,

The proposed Emergency Plan specifies a 90-minute response time for the **five** minimum staff HP Technicians that perform the Radiation Protection function. [Emphasis added for Clarity]

Further, Attachment 1, "*Emergency Response Organization Staffing Plan Comparison Table*" in Enclosure 1 states that the "*Current E-Plan, Rev. 68*" staffing for Health Physics includes,

5 HP Technicians available in 90 minutes of Alert [Emphasis added for Clarity]

Additionally, the summary of changes in Revision 68 of the Columbia Emergency Plan (ML23039A208) states in part,

Added HP Lead to Table 2-2 (which aligns with E-Plan Section 2.3.2.j) and adjusted the number for the HP Tech (Protective Actions) to 3 which had previously included the HP Lead, as this clarifies that the HP Lead was credited as one of the listed HP Techs (Protective Actions) in Table 2.2.

However, Table 2.2, "Energy Northwest Emergency Response Organization Essential Positions," in Revision 63 of the Columbia Emergency Plan (ML16208A5970) staffing for Health Physics includes,

6 HP Technicians available in 90 Minutes [Emphasis added for Clarity]

It is not clear to the NRC staff that the HP Lead meets the same level of qualification and training to perform the Protective Actions function as the HP Techs.

Request: Provide additional information to demonstrate that the HP Lead has the same level of qualification and training to perform the Protective Actions function as the HP Technicians.

RAI 4

Requirement:

- 10 CFR 50.47(b)(2) requires on-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.
- The licensee has adopted NUREG-0654 Rev. 2. Associated guidance in NUREG-0654, Section II.B, Evaluation Criterion B.1 states that the emergency plan specifies how the requirements of 10 CFR 50.47(b)(2) and the applicable sections of Appendix E to 10 CFR Part 50 are met.

Issue: In the original submittal dated January 30, 2024, Section 3.2.11, “[*Deviation 2-11*] Operations Support Center Craft at 90 minutes,” of Enclosure 1 states,

The NRC Safety Evaluation dated August 5, 2004 (ML042440479), found this 90-minute response time acceptable based on adequate resource availability, the cross-training of on-shift Equipment Operators (EO) in mechanical, electrical, and I&C [instrument and control] maintenance activities, and inclusion of all four on-shift EOs to support essential repair and corrective actions within 90 minutes of event classification, prior to staff augmentation.

Request: Provide clarification that the basis for the 2004 approval is currently valid for the cross-training of the on-shift EOs. In your clarification, provide technical justification for any deviations.

RAI 5

Requirement:

- 10 CFR 50.47(b)(10) requires a range of protective actions has been developed for the plume exposure pathway EPZ [emergency planning zone] for emergency workers and the public....
- Section IV.6 of Appendix E to 10 CFR Part 50 states in part, that if at any time during the decennial period, the EPZ permanent resident population increases such that it causes the longest ETE [evacuation time estimate] value for the 2-mile zone or 5-mile zone, including all affected Emergency Response Planning Areas, or for the entire 10-mile EPZ to increase by 25 percent or 30 minutes, whichever is less, from the nuclear power reactor licensee's currently NRC approved or updated ETE, the licensee shall update the ETE analysis to reflect the impact of that population increase.

- Associated guidance in NUREG-0654, Section II.J, Evaluation Criterion J.8.a states that [The latest ETEs are] incorporated either by reference or in their entirety into the emergency plan.

Issue: In the original submittal, dated January 30, 2024 (pages 56 & 57 of 98), Section J.8.a of Enclosure 2 states in part,

The ETE report will be updated: ...

B. If at any time during the decennial period, the EPZ permanent resident population increases such that it causes the longest ETE value for;

- the 2-mile zone (Section CGS)

OR

- the entire 10-mile EPZ (Sections 1 – 4 collectively)

to increase by 25 percent or 30 minutes, whichever is less, from the currently NRC approved or updated ETE.

However, Section M.3, “*Effect of Changes in Permanent Resident Population*,” of the “*Columbia Generating Station Development of Evacuation Time Estimates*,” dated July 27, 2022 (ML22242A210), states,

Section IV of Appendix E to 10 CFR Part 50, and NUREG/CR-7002, Rev. 1, Section 5.4, require licensees to provide an updated ETE analysis to the NRC when a population increase within the EPZ causes the longest 90th percentile ETE values (for the 2-Mile Region, 5-Mile Region or entire EPZ) to increase by 25% or 30 minutes, whichever is less.

Request: Provide technical justification for why Energy Northwest did not include the 5-Mile Region as a criteria to update the ETE report.

RAI 6

Requirement:

- 10 CFR 50.47(b)(15) requires radiological emergency response training is provided to those who may be called on to assist in an emergency.
- The licensee has adopted NUREG-0654 Rev. 2. Associated guidance in NUREG-0654, Section II.O, Evaluation Criterion O.1 states in part, that initial training and at least annual retraining are provided.

Issue: In the original submittal dated January 30, 2024, Section 3.7.5, “[*Deviation 7-5*] *Response Personnel Retraining Periodicity Not Specified*,” of Enclosure 1 states in part,

...the ERO training program is developed and evaluated based on position-specific responsibilities/tasks using SAT [systematic approach to training] principles, when

applicable. The SAT process determines the necessary periodicity of retraining (continuing retraining) on a task basis.

However, the statement that the SAT process determines the necessary periodicity of retraining does not discuss how the training program meets the guidance of NUREG-0654 Rev. 2.

Request: Clarify how the SAT frequency compares to and meets the intent of the “annual retraining” guidance of NUREG-0654, Revision 2.

RAI 7

Requirement:

- 10 CFR 50.47(b)(15) requires radiological emergency response training is provided to those who may be called on to assist in an emergency.
- The licensee has adopted NUREG-0654 Rev. 2. Associated guidance in NUREG-0654, Section II.O, Evaluation Criterion O.2.a states that the ERO training program is reviewed at least annually and revised as necessary.

Issue: In the original submittal dated January 30, 2024, Section 3.7.6, “[*Deviation 7-6*] *Training Program Review Periodicity Not Specified*,” of Enclosure 1 states in part,

In addition to continuous training evaluation through drills and exercise critique process that identifies performance issues and initiates training reviews for particular tasks, the SAT process includes provisions for training program reviews.

However, similar to RAI 6, there is no technical justification for not providing a periodicity in the training program.

Request: Clarify how the SAT frequency compares to and meets the intent of the “at least annually” guidance of NUREG-0654, Revision 2.

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/BC	NSIR/DPR/RLB/BC
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DATE	08/01/2024	08/01/2024	07/18/2024