

## Response to SDAA Audit Question

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**Question Number:** A-16.5.5.09-3

**Receipt Date:** 07/17/2023

**Question:**

When compared to NUREG-1431 Revision 5 (W-STC), GTS 5.5.9, “Containment Leakage Rate Testing (CLRT) Program,” Option B, proposed paragraph “e” does not conform to the language in the W-STC. Please provide information to justify this difference between the GTS and the W-STC.

The NRC provided the following feedback on the original response to A-16.5.5.09-3 via email on 9/6/2023:

Staff’s feedback on NuScale’s response to audit issue A-16.5.5.09-3

- The eRR file for A-16.5.5.09-3 contains a markup to OPTION B (paragraph d.1) that states, “Containment leakage rate acceptance criterion is 1.0 La” (emphasis added). It also contains redline strikethrough of the following: “Containment leakage rate acceptance criterion is < 0.60 La for the combined Type B and C tests.” These proposed changes conflict with NuScale SDAA generic TS 5.5.9 OPTION A, item c; FSAR Chapter 6; and TR-123952-P (FSAR Ref. 6.2-4). To be consistent, it appears it should state “Containment leakage rate acceptance criterion is < 0.60 La” (emphasis added).
- NuScale SDAA generic TS 5.5.9, OPTION B format contains items “d” and “d.1.” There is no item “d.2.” Therefore, it is sufficient to format all the requirements within item “d.” See NuScale SDAA generic TS 5.5.9 OPTION A item “c” as an example of format and wording that is consistent with what was found acceptable in NuScale DCA.

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**Response:**

NuScale revises SDAA Part 4 Technical Specification Section 5.5.9 “Containment Leakage Rate Testing (CLRT) Program,” Option A, paragraph c. to read:

“Containment leakage rate acceptance criterion is  $\leq 1.0$  La. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criterion is  $\leq 0.60$  La for the Type B and Type C tests.”

The first sentence is intended to specify the overall containment leakage limit. As a result, the 0.60 La containment leakage rate in the first sentence is replaced with 1.0 La. At  $\leq 1.0$  La the offsite dose consequences are bounded by the assumptions of the safety analysis.

NuScale revises SDAA Part 4 Technical Specification Section 5.5.9, “Containment Leakage Rate Testing (CLRT) Program,” Option B, paragraph d to conform with the Westinghouse Standard Technical Specifications as applicable to the NuScale US460 design. As discussed above, the 1.0 La acceptance criteria is retained in the first sentence. Type A and containment airlock testing are not applicable to the NuScale US460 containment design.

Markups of the affected changes, as described in the response, are provided below:

## 5.5 Programs and Manuals

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### 5.5.9 Containment Leakage Rate Testing Program

#### [OPTION A]

- a. A program shall implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option A, as modified by approved exemptions.
- b. The maximum allowable containment leakage rate,  $L_a$ , at  $P_a$ , shall be 0.20% of containment air weight per day.
- c. Containment leakage rate acceptance criterion is  ~~$\leq 0.60$~~   $\leq 1.0$   $L_a$ . During the first unit startup following testing in accordance with this program, the leakage rate acceptance criterion ~~is~~ ~~are~~  $\leq 0.60$   $L_a$  for the Type B and Type C tests.
- d. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.
- e. Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J.

#### [OPTION B]

- a. A program shall establish the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Nuclear Energy Institute (NEI) Topical Report (TR) NEI 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR 50, Appendix J," Revision 3-A, dated July 2012, as modified by the following exception:-
  1. The visual examination of the containment intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B, will be performed in accordance with the requirements of and frequency specified by the ASME Section XI Code, Subsection IWE, except where alternative examination methods or relief has been authorized by the NRC.
- b. The calculated peak containment internal pressure for the design basis accident,  $P_a$ , is ~~[940] psia~~ ~~940~~. The containment design pressure is 1200 psia.

## 5.5 Programs and Manuals

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### 5.5.9 Containment Leakage Rate Testing Program (continued)

- c. The maximum allowable containment leakage rate,  $L_a$ , at  $P_a$ , shall be 0.20% of containment air weight per day.
- d. ~~Containment leakage rate acceptance criterion is  $< 0.60 L_a$  for the combined Type B and C tests.~~ Containment leakage rate acceptance criterion is  $\leq 1.0 L_a$ . During the first unit startup following testing in accordance with this program, the leakage rate acceptance criterion is  $\leq 0.60 L_a$  for the Type B and Type C tests.
- e. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.
- f. Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J.

### 5.5.10 Setpoint Program (SP)

- a. The Setpoint Program (SP) implements the regulatory requirement of 10 CFR 50.36(c)(1)(ii)(A) that technical specifications will include items in the category of limiting safety system settings (LSSS), which are settings for automatic protective devices related to those variables having significant safety functions.
- b. The Limiting Trip Setpoint (LTSP), Nominal Trip Setpoint (NTSP), As-Found Tolerance (AFT), and As-Left Tolerance (ALT) for each Technical Specification required automatic protection instrumentation function shall be calculated in conformance with [TR-122844-P, Rev. 0, "NuScale Instrument Setpoint Methodology."]
- c. For each Technical Specification required automatic protection instrumentation function, performance of a CHANNEL CALIBRATION surveillance "in accordance with the Setpoint Program (SP)" shall include the following: