From:
 SHAW Don (AREVA)

 To:
 Ruffin. Steve

 Subject:
 RE: CoC 1029 Amendment 3, Confinement RAI

 Date:
 Monday, November 05, 2012 9:02:28 AM

Steve,

Thank you for the clarification.

Regards,

Don Shaw Licensing Manager (Storage) Transnuclear, Inc. (An AREVA Company) 7135 Minstrel Way - Suite 300 Columbia, MD 21045 Phone: 410-910-6878 Mobile: 240-565-3452 Fax: 410-910-6902 don.shaw@areva.com

From: Ruffin, Steve [mailto:Steve.Ruffin@nrc.gov] Sent: Monday, November 05, 2012 9:00 AM To: SHAW Don (TRANSNUCLEAR INC) Subject: RE: CoC 1029 Amendment 3, Confinement RAI

Don, Here is the clarification:

RAI 8-3 of the first round asked "how the water level can be monitored?" and my RAI 8-2 of the second round asks "how that water level of 12 inch is determined?" Yes, it's the basis of draining twelve inches (as opposed to some other number)?

Regards.

Steve Ruffin Project Manager, Licensing Branch Division of Spent Fuel Storage and Transportation Office of Nuclear Material Safety and Safeguards U.S. Nuclear Regulatory Commission Mail Stop EBB-3D-02M Phone: (301) 492-3219 Fax: (301) 492-3342 steve.ruffin@nrc.gov

From: SHAW Don (AREVA) [mailto:don.shaw@areva.com]

Sent: Friday, November 02, 2012 8:02 AM To: Ruffin, Steve Subject: RE: CoC 1029 Amendment 3, Confinement RAI

Steve,

Regarding RAI 8-2 below, dealing with draining the annulus to twelve inches below the top shell, we answered a similar question (RAI 8-3) in the first RAI response. I have attached the question and answer, and the changed SAR pages here.

We are wondering if the new question is asking the same thing, or is it asking for the basis of draining twelve inches (as opposed to some other number)?

Can you discuss this with the reviewer?

Thank you,

Don Shaw Licensing Manager (Storage) Transnuclear, Inc. (An AREVA Company) 7135 Minstrel Way - Suite 300 Columbia, MD 21045 Phone: 410-910-6878 Mobile: 240-565-3452 Fax: 410-910-6902 don.shaw@areva.com

From: Ruffin, Steve [mailto:Steve.Ruffin@nrc.gov] Sent: Thursday, November 01, 2012 3:22 PM To: SHAW Don (TRANSNUCLEAR INC) Subject: CoC 1029 Amendment 3, Confinement RAI

Don,

Please find enclosed additional RAI questions pertaining to confinement.

Chapter 7: Confinement Evaluation

7-1 Clarify the helium leak testing on <u>the vent/siphon block-to-shell weld</u>, describe the helium leak testing method/procedure on this confinement weld in the SAR, and revise the Technical Specification (TS) to assure the helium leak testing on this confinement weld.

The applicant stated in SAR B.7.1.3 that the confinement vent and siphon block-to-shell weld located at the top of the 32PTH DSC is PT-tested in accordance with alternatives to the ASME Code, and <u>did not mention the helium leak testing on this weld in SAR B.9.1.3</u>. Instead of being an alternative, justification, and compensatory measures, the helium leak test is required to demonstrate confinement integrity for the confinement welds per ANSI N14.5 and ISG-25. The applicant should clarify that this confinement weld is helium leak-tested, describe the helium leak testing procedure, applied to this confinement weld, in the SAR, and revise the TS to assure the

helium leak testing on this confinement weld.

This information is required by the staff to access compliance with 10 CFR 72.236(j) and (l).

7-2 Identify whether the weld of inner top cover plate to vent/siphon block, as shown in SAR Drawing ANUH-01-4002 (Section E-E), is the confinement weld of the 32PTH2 DSC, and delineate the helium leak testing procedure in the SAR.

The staff reviewed the SAR Drawing ANUH-01-4002 (Section E-E), and identified that beside the vent/siphon block-to-shell weld, the circumferential/longitudinal seam welds, the weld of inner bottom cover plate to shell, and the welds of vent/siphon port covers, <u>the weld connecting the inner top cover plate and the vent/siphon block</u> should function as the confinement weld. If identified as the confinement weld, this weld should be helium leak tested and the test procedure should be addressed in the SAR.

This information is required by the staff to access compliance with 10 CFR 72.236(j) and (l).

7-3 Clarify and add helium leak testing in all confinement components/boundaries of the 32PTH2 DSC in SAR Chapter B.7.

The applicant described, in SAR B.9.1.3, the helium leak tests during fabrication and after the 32PTH2 DSC has been loaded with fuel assemblies. The applicant should state in SAR Chapter B.7 that the entire confinement boundary will be helium leak tested during fabrication (a temporary seal plate is used) and after the duel assemblies are loaded (the inner top cover plate and the vent and siphon port cover plates have been welded in place) to demonstrate the confinement integrity of the 32PTH2 DSC. The confinement boundary should include the DSC shell, the vent and siphon block, the inner top and bottom cover plates, and the associated welds such as the circumferential and longitudinal seam welds, the vent and siphon port covers, the weld of inner top cover plate to DSC shell, and the weld of inner top cover plate to vent/siphon block (if identified as the confinement weld).

This information is required by the staff to access compliance with 10 CFR 72.236(j) and (l).

7-4 Provide the details how the welds of the inner top cover plate are helium leak tested using other alternate means to meet the leak tight criteria.

The applicant stated in SAR B.7.1.1 that the welds of the inner top cover plate are tested using an optional test port in the outer top cover plate or other alternate means (e.g., a test head) to meet the leaktight criteria of 1.0×10^{-7} ref-cm³/s. The applicant should describe in detail the test method, procedure, and accuracy for each alternate means in the SAR to assure the leaktight criteria is met.

This information is required by the staff to access compliance with 10 CFR 72.236(j) and (l).

Chapter 8: Operating Procedure

8-1 Revise descriptions of Steps 12 and 16 under SAR B.8.1.1.2 <u>32PTH2 DSC Fuel Loading</u>.

The applicant described "spray the exposed portion of the TC with water" in Step 12 and "continue to spray the TC with water" in Step 16 of SAR B.8.1.1.2 "32PTH2 DSC Fuel Loading." To assure that the demin water is used for decontamination, the applicant should revise the statements as "spray the exposed portion of the TC with <u>demin</u> water" in Step 12 and "continue to spray the TC with <u>demin</u> water" in Step 16 of 32PTH2 DSC Fuel Loading

This information is required by the staff to access compliance with 10 CFR 72.234(f) and 72.236(i).

8-2 Explain description of Step 5 of SAR B.8.1.1.3 <u>32PTH2 DSC Drying and Backfilling</u>.

The applicant described in Step 5 of SAR B.8.1.1.3 <u>32PTH2_DSC_Drying and Backfilling</u> "....allow water from the annulus to drain out until the water level is approximately twelve inches below the top shell". The applicant is required to explain how the water level of 12 inches is determined for 32PTH2 DSC drying and backfilling.

This information is required by the staff to access compliance with 10 CFR 72.150 and 72.234(f).

8-3 Provide information of (a) the water amount/percentage allowed (b) the procedure to measure the water amount and (c) the time periods of both helium blowdown and water pumping operations used in the 32PTH2 DSC.

The applicant stated in Step 16(a) and (b) of SAR B.8.1.1.3 <u>32PTH2 DSC Drying and Backfilling</u> "using helium blowdown or water pump to remove the cavity water." The applicant should provide more information on (a) the water amount/percentage allowed in the DSC, (b) the procedure to measure the water amount in the DSC, and (c) the time periods of helium blowdown operation and the water pumping operation to meet the water limitation in the 32PTH2 DSC.

This information is required by the staff to access compliance with 10 CFR 72.150 and 72.234(f).

Technical Specification

TS-1 Clarify or provide the time limit when using helium blowdown for the vacuum drying of the 32PTH2 DSC.

The applicant indicated in TS 3.1.1.b that there is no time limit if helium is used for blowdown for 24PT4 DSC vacuum drying, and in TS 3.1.1.c that the helium shall be used for all drainage of liquid water from the 32PTH2 DSC without mentioning the time limit for vacuum drying. To assure the proper operation of vacuum drying, the applicant should indicate "the required time limit" or "no time limit" in TS when helium is used in the vacuum drying of 32PTH2 DSC.

This information is required by the staff to access compliance with 10 CFR 72.150, 72.234(f) and 72.236(i).

Regards.

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