

HI-STAR 180 Containment

Topics for the Conference Call on August 31, 2009.

Drawings Material List

DM-1 Justify that the nominal seal size and groove size that is specified in the design drawings, adequately incorporates compression, springback, and plasticity characteristics, which are needed to assure sufficient sealing within the seal gland. Clarify and justify the definition of 'nominal' in the design drawings with respect to verifying that actual measured seal dimensions satisfied the design evaluated in the application.

Although the NRC recognizes Holtec has an approved QA program as referenced in your RAI response DM-4, it is the responsibility of the applicant to demonstrate the specified design will perform as intended. It will be the responsibility of the cask user to verify the package conforms to the specified design in the CoC, including seal dimensions. Without tolerances specified with the nominal dimensions, it is difficult to determine if cask users can make a determination that seals meet the critical characteristics as intended in the application.

This information is needed to determine compliance with 10 CFR 71.51 and 71.55(c)

Sections 7.1.2.1.12 and 7.1.2.1.13

7-1 Clarify if the applicant intended to have helium leak tests performed on the inner closure lid port cover plate inner seals in Section 7.1.2.1.12 as well as Section 7.1.2.1.13.

Also, the staff did not agree in Section 7.1.2.1.13 that the leak testing of the inner closure lid containment boundary seals may take place after the outer closure lid containment boundary seals during the initial loading of each package. The staff would like to see that sentence removed to ensure the inner closure lid inner seals and port cover plate inner seals are tested directly through the inner closure lid inter-seal test port and port cover plate inter-seal test ports respectively at the time of loading. The inner closure lid and vent and drain port cover containment boundary seals may then be tested through the outer closure lid access port at time of shipment as specified in procedure 7.1.3.

The staff suggests rewriting Sections 7.1.2.1.12 and 7.1.2.1.13 as appropriate to clarify:

- With the inner closure lid inter-seal test port plug (that will be located beneath the outer closure lid access port) removed, the inner closure lid inter-seal space is dried. All leakage tests to be performed are calibrated in accordance with ANSI N14.5-1997 to ensure test sensitivity requirements are met. The inner closure lid inner seal is helium leak tested through its respective inter-seal test port to the required acceptance criteria listed in Chapter 8. Unacceptable leakage rates will require cleaning or repair of the seal surfaces and replacement of the seals prior to retesting of the seals.

- The sealing surfaces and mating surfaces of the inner closure lid port covers are inspected for signs of damage. Any damage that would prevent a seal is remedied and any old seals are removed. The space beneath the port covers are filled with 99.99% purity helium to approximately atmospheric pressure. The port cover bolts are torqued in accordance with Table 7.1.1. The vent and drain port cover plate inner seals are helium leak tested through their respective inter-seal test port to the required acceptance criteria listed in Chapter 8. Unacceptable leakage rates will require cleaning or repair of the seal surfaces and replacement of the seals prior to retesting of the seals. Following the leakage test, the vent and drain port cover plate inter-seal test port plugs are left removed.

Holtec is responsible for assuring their procedures are safe and compliant with 10 CFR Part 71.

This information is needed to determine compliance with 10 CFR 71.51 and 71.55(c)

Sections 7.1.2.1.12, 7.1.2.1.13, 7.1.2.2.4, 7.1.3.1.a, and 7.1.3.1.d

7-2 Clarify if in procedures 7.1.2.1.12, 7.1.2.1.13, 7.1.2.2.4 and 7.1.3.1.d the sentences on cleaning or repairing the seal surfaces and/or repairing the seals should read, "Unacceptable leakage rates will require cleaning or repair of the seal surfaces and replacement of the seals prior to retesting of the seals." Also clarify if this sentence should be added to the end of procedure 7.1.3.1.a.

It appears that the above procedures are omitting the necessary replacement of the seals if the seals are untorqued following a failed leakage test.

This information is needed to determine compliance with 10 CFR 71.51 and 71.55(c)

8-1 Clarify if Table 8.1.2 of the SAR under components tested for the fabrication leakage rate test and maintenance leakage rate test should include the inner closure lid, outer closure lid, and inner closure lid vent/drain port covers.

It appears that these components are part of the containment boundary and should be leak tested during fabrication and maintenance.

This information is needed to determine compliance with 10 CFR 71.51