

10 CFR 71.95 REPORT EVALUATION FORM

Docket No.: 71-9168
Package Model No.: 8-120B
Report Submitted By: Fenok, Erwin Resin Solutions, Entergy, North Anna Power stations, Cooper Nuclear Station, Grand Gulf, SMUD,.....
Report Date: August 24, 2015
Report ADAMS Accession Nos.: ML15229A173, ML15237A293, ML15232A354, ML15236A356, ML15233A397, ML15231A856, ML15233A540, ML15231A856, ML15208A495; ML15225A465, ML15216A097, ML15218A009, ML15202A058, ML15243A128. ML15243A128, ML15243A035

Review the incoming report to determine if additional Commission or staff action is warranted. The review should consider whether the report identifies a generic defect or problem with the package design and the safety significance of the issue. Note that a high safety significance represents a potential for significant radiation exposure, medium safety significance represents a potential for some moderate radiation exposure, and low safety significance represents little or no potential for radiation exposure.

1. The report identifies:

- Significant reduction in the effectiveness of a package during use;
- Defect with a safety significance;
- Shipment in which conditions of the approval were not observed.

2. What is the safety significance? High Medium Low

3. Summary of the report:

A condition of the certificate of compliance (CoC) was not observed: the vent port pre-shipment leak tests may not have had the required test sensitivity of 10^{-3} ref-cm³/sec.

A neoprene gasket, added under the test manifold, could, when compressed, constrict under the head of the vent port plug cap screw, thus reducing the sensitivity of the leak test. Such a gasket was used on about 100 shipments from September 2013 to June 2015. This condition is not safety-significant because:

- (i) The seals are periodically helium leak tested in accordance with Chapter 8 of the SAR,
- (ii) The vent ports are rarely opened,
- (iii) There is a high degree of conservatism on the vent port leak rate test (with a factor of 9),
- (iv) No contamination was observed around the vent port openings to suggest leakage.

4. Corrective actions taken by the licensee:

Corrective actions implemented by EnergySolutions include the following:

- (1) notification of all users of the package,
- (2) removal of the neoprene gaskets from service,
- (3) design and test of a new manifold gasket,
- (4) development of a new procedure, and distribution of new gaskets to all upcoming shipment users,
- (5) Revision of the drawing for the 8-120B air drop manifold to include the new gasket seal.

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5. Staff comments:

Chapter 7 of the SAR requires a pre-shipment leak test of the primary lid, secondary lid, and vent port seals to be performed prior to every shipment.

The leak rate test specifications, sized for the large primary lid, are de facto conservative for the small volume of the vent port. Calculations show that the test is a factor of 9 more sensitive than the 10^{-3} ref.cm³/sec required by Chapter 8 of the SAR. However, it is not possible to confirm that the reduction in sensitivity of the leak test may be always offset by the conservatism of the test criteria.

There was no indication of leakage from the vent port from any shipment and no exposure to radiation due to the gaskets; thus, there was no safety consequence from performing a vent port pre-shipment leak test without the required sensitivity of 10^{-3} ref.cm³/sec. Further, the helium leak test of the vent port seal did provide assurance of seal integrity.

6. Staff conclusion:

- The report does NOT identify generic design or license/certificate issues that warrant additional Commission or staff action. This report is considered closed.
- There is a need to take additional action. Provide a summary of the bases and recommended actions:

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SFST 71.95 Report File

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