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Your ref: Docket No. 71-9291
Our ref: LTR-LCPT-12-11

October 5, 2012

SUBJECT: Event Report - Docket 71-9291, Certificate of Compliance USA/9291/B(U)F-96,
Liqui-Rad (LR) Transport Unit Package

Dear Mr. Mark Lombard:

A written report is hereby submitted pursuant to 10 CFR 71.95. The written report is for an instance in which conditions of approval in the Certificate of Compliance for LR Transport Unit Package (USA/9291/B(U)F-96) were not observed in making a shipment.

(1) Abstract / Background

The LR Packaging is designed to transport Type B quantities of fissile uranyl nitrate solutions.

The containment boundary of the LR is defined as the containment vessel, primary lid and seal, and secondary lid and seal. This containment vessel is built in accordance with the ASME Pressure Vessel Code (Section VIII Division 1).

The primary and secondary lids provide a leak-tight seal, which is leak testable. Both of these lids are sealed with double O-rings, and secured by 5/8" stainless steel bolts and nuts (sixteen sets of nuts and bolts are used to secure the primary lid, while the secondary lid is secured by twelve). The closure torque required for each bolt or stud is 75 ft.-lbs. [+10 -0]

The Certificate of Compliance 9291, Revision 8, specifies condition 6 (a) as follows:

- 6 (a) The package shall be prepared for shipment and operated in accordance with the Operating Procedures of Chapter 7 of the application.

Chapter 7 Section 7.3 specifies as follows:

- 7.3 Preparation of Empty LR for Transport
- a. After initial usage, all applicable steps set forth in Section 7.1.2 are required for transportation of the empty packaging, with the exception that the leak test required by 7.1.2 (d) can be waived if the heel

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contains less than an A2 quantity. A newly fabricated package that has never carried UN solution is exempted from the requirements of Section 7.

Chapter 7 Section 7.1.2 (c) specifies as follows:

- c. Tighten all bolts to the proper torque of 75 ft-lb [+10 -0], alternating bolts on opposing sides of the lid. ...

This information is provided pursuant to 10 CFR 71.95 (c) (1).

(2) Narrative of the Event

LR containers are used to transport uranyl nitrate (<5.0 wt % U-235) from Nuclear Fuel Services (NFS) to Westinghouse. Westinghouse then returns the empty LR containers to NFS, for their reuse.

On the morning of August 20th, 2012, NFS Operators were performing a receipt inspection of a shipment of empty LR containers, which had been sent from Westinghouse. As part of this inspection, the outer lid of packaging LR036 was removed, which is when the Operators noticed that five of the twelve bolts on the secondary lid did not appear to be normal. Upon further inspection, they found that the nuts on those five bolts were only "finger tight", and had not been tightened to the proper torque.

A contamination survey was performed on the outer well of LR036, and found the transferable contamination to be below the limits provided in the shipper-receiver agreement and well within regulatory requirements. The survey showed negligible alpha contamination, and a beta/gamma activity of no higher than 43 dpm/100 cm².

This information is provided pursuant to 10 CFR 71.95 (c) (2).

(3) Assessment of Safety Consequences and Implications of the Event

The shipment was sent and received without incident. No leaks or exposure to contamination occurred, as is shown by the contamination survey noted above.

This information is provided pursuant to 10 CFR 71.95 (c) (3).

(4) Corrective Actions

Immediate actions taken:

This incident was captured in the Westinghouse corrective action program as Issue #12-234-C001. A focused management oversight process was implemented for the unloading and preparation for shipment of LR containers, and remained in effect until the formal corrective actions which follow were completed.

Westinghouse performed a casual analysis where the apparent cause was identified as a less than adequate set of instructions and expectations for the procedure being followed. Contributing to the incorrect job execution was a combination of lost place-keeping and imprecise communications during the operation.

The corrective actions which were established and completed in order to prevent a recurrence of this non-compliance are as follows:

- The operating procedure COP-836047 was reviewed to confirm that the instructions were compliant with the Safety Analysis Report.
- Operations personnel conducted a lessons learned / best practices focused team meeting to identify areas for improvement, and to address the place-keeping and communications issues which had been identified.
- An expanded checklist has been developed for use by the Operations staff, which includes the best practices to ensure critical steps are completed in a safe and compliant manner when shipping LR containers.

This information is provided pursuant to 10 CFR 71.95 (c) (4).

(5) Extent of Condition

The inner lid had five (5) nuts/bolts which had not been tightened appropriately.

A review of previous issues related to the LR containers did not find any similar occurrences.

This information is provided pursuant to 10 CFR 71.95 (c) (5).

(6) Contact

Please contact Matthew Presson at (803) 647-1793 for any additional information about this event.

This information is provided pursuant to 10 CFR 71.95 (c) (6).

(7) Extent of Exposure to Radiation

No individuals were exposed to radiation due to this issue.

This information is provided pursuant to 10 CFR 71.95 (c) (7).

Sincerely,

** Electronically approved*

Matthew R. Presson
Licensing, Compliance and Package Technology

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WESTINGHOUSE ELECTRIC COMPANY, LLC

cc

Wes Stillwell, Director, Nuclear Fuel Transport

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