

10 CFR 71.95 REPORT EVALUATION FORM

Docket No.: 71-9301

Package Model No.: TNF-XI

Report Submitted By: R. E. Link, AREVA NP Inc. (AREVA)

Report Date: November 12, 2012

Report ADAMS Accession No.: ML12328A020

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:

The Department of Transportation Certificate of Competent Authority No. USA/0653/AF-96 for the Model No. TNF-XI is a revalidation of the French Certificate of Competent Authority No. F/381/AF-96 with the addition of a table specifying material loading limits. This table is from the U.S. Nuclear Regulatory Commission (NRC) Certificate of Compliance No. 9301 for domestic transport of this package. The table specifies loading limits for both pellets and powder. Transnuclear, who holds the U.S. certificate, determined that granulated powder with a particle diameter greater than 0.5 mm (0.0394 in.) should be loaded using the heterogeneous loading restrictions. AREVA's particle size is greater than 0.5 mm. AREVA determined that the majority of shipments made since November 2003 were non-compliant based on particle size.

AREVA stated that human error caused the certificate limits to be violated in that both AREVA and Nuclear Fuel Industries personnel lacked information that a particle size greater than 0.5 mm should be packaged as heterogeneous material. AREVA noted that this particle size limit is not listed in the certificate of competent authority.

4. Corrective actions taken by the licensee:

After determining the appropriate mass limits based on particle size, AREVA limited each cavity to two full pails and one empty pail for shipments of powder enriched greater than 4.05 weight percent. Packages that were loaded and waiting for shipment were reduced to two full pails per cavity prior to shipment. AREVA has not determined the long-term solution to this issue.

5. Staff comments:

While the event occurred during an import shipment using a Department of Transportation certificate of competent authority for which the underlying certificate and its technical basis was issued by NRC, the staff reviewed AREVA's report and corrective actions. Staff agrees that the

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safety significance of this incident is low. It is unclear what long-term solution AREVA desires to implement, to be able to load packages more than two thirds full. The current corrective action to limit the mass in each package is sufficient to minimize future occurrences until AREVA develops and implements a long-term solution.

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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