

10 CFR 71.95 REPORT EVALUATION FORM

Docket No.: 71-9297
Package Model No.: TRAVELLER
Report Submitted By: Tanya Sloma, Westinghouse Electric Company, LLC
Report Date: December 21, 2011

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:

"Non-conforming" pellets, that were supposed to be scrapped, were loaded into fuel rods and shipped in a Model No. Traveller XL package between 1/07/2009 and 2/11/2009, and between 7/19/2010 and 9/27/2010.

In the first shipment, one pellet tray contained a pellet with a diameter exceeding the maximum allowed diameter by 2.2 mils, while, in the second shipment, the pellet diameter was 0.3 mils greater than the maximum manufacturing tolerance.

Sensitivity studies were performed for a 16x16 fuel assembly type in both NCT and HAC conditions to evaluate the increase in reactivity (K_{eff}) due to the changed pellet diameter. Results indicate that the maximum K_{eff} value was still less than the upper subcritical limit (USL) documented in the criticality safety evaluation of the Model No. Traveller XL package.

The small increase in K_{eff} had no adverse impact on the safety basis of the package.

4. Corrective actions taken by the licensee:

- A Corrective Action Process (CAP) was issued to instruct Westinghouse Nuclear Fuel Departments to review the consequences of deviation disposition requests, i.e., identification of non-conformances pertaining to pellet diameter specifications, performance of re-measurement procedures, marking of "out of specification" material in non-conforming trays as "scrap", re-sampling scrap trays, physical verification that scrap trays are in fact really scrapped and not released for use, etc.
- An evaluation of the criticality safety analysis was performed and documented.

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5. Staff comments:

There was no radiation exposure due to the non-conforming pellets being shipped in the Model No. Traveller XL package.

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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M. Ferdas, RI S. Vias, II C. Lipa, III B. Spitzberg, IV
 B. Benny C. Araguas
 D. White, FSME NMED Project Manager

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