

10 CFR 71.95 REPORT EVALUATION FORM

Docket No.: 71-9233

Package Model No.: TN-RAM

Report Submitted By: Stewart B. Minahan

Report Date: September 6, 2005

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:

On July 8, 2005, Chem-Nuclear Systems, LLC (Chem-Nuclear), the recipient of a package from the Cooper Nuclear Station (CNS), detected radioactive debris between the cask and liner of the TN-RAM cask. Chem-Nuclear documented the situation in its corrective action program. A radiation survey detected a dose rate of 35 Rem/hour and was attributed to a small rust colored metal object approximately 1/4 inch by 1/4 inch that was stuck to the cask wall. The object was quickly removed and placed in temporary storage. The contact dose rate of the object was 70 Rem/hour, and the dose rate at a distance of 1 foot was 3 Rem/hour. Chem-Nuclear notified both CNS and the Department of Transportation of the event.

A root cause evaluation determined that wave action and water movement, caused by moving the cask or liner, most likely caused small debris items with relative large surface areas to move about in the water of the spent fuel pool. In addition, the procedure being used at the time was found to have several deficiencies. A contributing cause of the event was a self-checking failure with respect to evaluation of industry operating experience. No action was taken to prevent and occurrence based on an operating experience reports where other plants had experienced similar events.

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4. Corrective actions taken by the licensee:

Corrective action taken by Chem-Nuclear include the following:

1. Shipment of casks from CNS were curtailed until the root cause had been determined.
2. The shipping procedure related to this event was put on administrative hold.
3. The procedure is being revised to include requirements that 1) vacuum the steel structure to remove any debris, 2) inspect the interior by camera when the cask is placed in the spent fuel pool and water movement has subsided, 3) inspect interior of the cask by camera after the liner is moved and positioned for loading, and 4) include two independent observers watching the inspection by monitor and recording the inspection.
4. The project management procedure was revised to include a check for relevant industry operating experience.
5. Current and upcoming projects whose execution is not complete were checked for relevant operating experience that may apply.

5. Staff comments:

A root cause analysis conducted by Chem-Nuclear identified the probable cause of the event. Reasonable corrective action was taken at the time of the event and as a result of the analysis, Chem-Nuclear appropriately revised the procedure to avoid re-occurrence.

6. Staff conclusion:

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

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