

10 CFR 71.95 REPORT EVALUATION FORM

Docket No.: 71-9196
Package Model No.: UX-30
Report Submitted By: James D. Lewis, Paducah Gaseous Diffusion Plant
Report Date: September 30, 2011
Report ADAMS Accession No.: ML11280A113

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 August 2, 2011, United States Enrichment Corporation (USEC) identified two cylinders which did not appear to have a minimum of seven threads engaged in the cylinder as required by the Section 6.10.6 requirements for a new valve installation in ANSI N14.1-2001, "Uranium Hexafluoride Packaging for Transport." Conformance to this standard is required by Condition 6 of Certificate of Compliance No. 9196 for the UX-30 transportation package which is used to transport the cylinders. These cylinders, numbered WEC 1080 and WEC 1112, are owned by a USEC customer. After discussing its concerns with the customer on August 2, 2011, including USEC's counting methods for thread engagement, USEC requested and received permission to remove the subject valves to unequivocally assess thread engagement. USEC also requested that the customer provide the most recent recertification information for the two cylinders.

Based on a review of the recertification data requested from and provided by the customer, USEC determined that container WEC 1080 had previously been filled and shipped two times since its recertification in 2010, and WEC 1112 had previously been filled and shipped four times since its recertification in 2008. All shipments contained solid enriched uranium hexafluoride.

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4. Corrective actions taken by the licensee:

USEC removed both valves from their cylinders and documented each valve had only six threads engaged; therefore, USEC determined the valves were not conforming to the ANSI standard requirement. Both valves were replaced with new valves. The new valves subsequently passed the requisite leak test requirements.

USEC compared its current inspection procedures with the ANSI N14.1-2001 standard requirements to assess its current requirements for inspection of thread engagement. Even though counting of threads is somewhat subjective, USEC believed its methods exceeded the current requirements. Following a previous report on June 3, 2011, to Ms. Vonna L. Ordaz, Director, Division of Spent Fuel Storage and Transportation, Office of Nuclear Material Safety and Safeguards regarding thread engagement, USEC ensured its thread engagement counting practice was consistent throughout its operations procedures and determined the number of times a thread count was mandated exceeded that required by the standard.

. Staff comments:

In the case of WEC 1080 and WEC 1112 there was no indication of UF₆ leakage from the valve thread engagement area. Even though valve thread engagement was not between 7 and 12 threads, the valve installation performed its intended safety function and there were no safety consequences. This event resulted in no exposures beyond normal exposures incident to routine cylinder handling and cylinder valve replacement operations.

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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 RPowell, RI SWalker, RII MKunowski, RIII JWhitten, RIV
 R. Boyle and M. Conroy, Department of Transportation
 R. Sun and A. McIntosh, Project Manager

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