# 10 CFR 71.95 REPORT EVALUATION FORM

| | |
|---|---|
| **Docket No.:** | 71-9196 |
| **Package Model No.:** | UX-30 |
| **Report Submitted By:** | Steven R. Penrod, USEC |
| **Report Date:** | July 1, 2009 [ML091880351] |

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 May 5 and 7, United States Enrichment Corporation (USEC), conducted receipt inspections which identified eight ball-lock pins, on seven Model UX-30 transportation packages, were either missing, damaged, not fully engaged, or disengaged and gangling by the lanyard. USEC followed up on this finding by performing in-transit inspections at the carrier's staging area on May 18, and there discovered two ball-lock pins disengaged and dangling by the lanyard, one each on two Model No. UX-30 transportation packages.

For the UX-30 packages which were still in transit at the carrier's staging location, USEC inspected, and replaced the pins as necessary to be in working order prior to completing transit to the USEC facility.

**4. Corrective actions taken by the licensee:**

- USEC confirmed that the ball locking mechanism was working properly, or replaced and re-installed the pins in the UX-30 packages prior to the packages being put back into transportation.
- USEC has undertaken an aggressive inspection program to identify failed ball-lock pins prior to shipment from their facility, but also periodically after arrival at the Port of Baltimore prior to truck transportation in the U.S.
- USEC has a corrective action program in place to replace the pins which have been determined to be susceptible to marine environment corrosion, with an equivalent pin manufactured from all stainless steel components, as authorized by the Certificate of Compliance.

# 10 CFR 71.95 REPORT EVALUATION FORM

**Docket No.:** 71-9196

**Package Model No.:** UX-30

**Report Submitted By:** Steven R. Penrod, USEC

**Report Date:** July 1, 2009 [ML091880351]

**5. Staff comments:**

The ball lock pin is identified as an item requiring annual replacement. Recent increased use of the package for international transport, and an increased focus on the requirement for all pins to be engaged during transit, has resulted in a series of 10 CFR 71.95 reports. The authorized design of the UX-30 allows for the ball lock pin to have an aluminum handle, and stainless steel body. This design has been identified as being more susceptible to failure, primarily due to corrosion which results in the ball-mechanism failing to properly engage.

It is expected that the ball lock pins will periodically fail. The Certificate of Compliance requires inspection of the ball lock pins, and a functional test to ensure the mechanism is locked in place prior to each shipment. There are 10 pins required on each overpack, five on each side. The safety significance of a single pin failure during transit has not been evaluated by the Certificate holder, however, due to the redundant nature of the closure mechanism, and the results of the drop testing performed on the package, staff finds the safety significance of a single pin not being engaged during transit to be low.

**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:

DISTRIBUTION:
SFST 71.95 Report File
R. Bellamy, I D. Collins, II J. Madera, III B. Spitzberg, IV
B. White D. Pstrak
D. White, FSME NMED Project Manager

**G:\SFST\Part 71\71.95 reports\71.95 Report Evaluations\71-9196 7-31-09.doc** ML093340448

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **OFC** | SFST | C | SFST | C | SFST | | | | | |
| **NAME** | MSampson | | MDeBose | | BJDavis for EBenner | | | | | |
| **DATE** | 11/24/2009 | | 11/ 24/2009 | | 11/30/2009 | | | | | |

C = COVER E = COVER & ENCLOSURE N = NO COPY

OFFICIAL RECORD COPY