

SEP 19 2018

ATTN: Document Control Desk
Director, Division of Spent Fuel Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Louisiana Energy Services, LLC
NRC Docket No. 70-3103

Subject: 10 CFR 71.95 60 Day Report, UX-30 Pins

Reference: 1) UX-30 Overpack Operations and Maintenance Manual
2) Competent Authority Certification for A Type B(U)F Fissile Radioactive
Materials Package Design Certificate Usa/9196/B(U)F-96, Revision 32

On July 23, 2018, Louisiana Energy Services, d.b.a, URENCO USA (UUSA), self-identified a non-compliance to 30B cylinder overpack closing and sealing criteria set forth in the UX-30 Overpack Operations and Maintenance Manual. In accordance with 10 CFR 71.95(a)(3), UUSA is providing a written report within sixty days of the discovery of this event (Enclosure 1).

If you have any questions, please contact Wyatt Padgett, Licensing and Performance Assessment Manager, at 575-394-5257.

Respectfully,


Stephen Cowne
Chief Nuclear Officer and Compliance Manager

Enclosures: 1.) 10 CFR 71.95 Report

NM5520

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Enclosure 1

10 CFR 71.95 Report

As required by 10 CFR 71.95(a)(3), UUSA is providing responses to the following requirements:

(1) A brief abstract describing the major occurrences during the event, including all component or system failures that contributed to the event and significant corrective action taken or planned to prevent recurrence.

On July 23, 2018, UUSA Logistics Planning received notification from GNF-A shipping that UX-30 container #SPUX0088, shipment #80011831, had two 2" ball lock pins not in place upon entering the GNF-A site.

An Event Report was created in the UUSA Corrective Action Program. The Event Report was designated as an Adverse Condition and a Suspected Cause Investigation was performed as discussed in section (vii). An action has been created to revise UUSA Procedure LO-3-2000-01, Receipt and Shipment of Cylinders, to add an additional inspection of the overpack immediately prior to departure.

(2) A clear, specific, narrative description of the event that occurred so that knowledgeable readers conversant with the requirements of part 71, but not familiar with the design of the packaging, can understand the complete event. The narrative description must include the following specific information as appropriate for the particular event.

(i) Status of components or systems that were inoperable at the start of the event and that contributed to the event;

The UX-30 Overpack is the industry standard for the Class 7 transport of 30B type cylinders as per ANSI standard N14.1, containing uranium hexafluoride (UF₆) with a maximum uranium 235 enrichment of 5%. There are three main purposes of the UX-30 Overpack:

- 1) To provide overall thermal protection during accident conditions,
- 2) To provide impact protection for the cylinder valve, plug, and body, and
- 3) To provide minimum spacing for criticality control. The overpack relies on the 30-inch cylinder to provide containment for the UF₆ material.

The UX-30 Overpack is a horizontal cylinder split horizontally in two stainless steel half-shells with a stepped and gasket joint. The two half-shells are assembled by 10 retractable ball locking pins made captive by steel cables.

Upon noticing 2 of the 10 ball locking pins were missing, the pins were replaced and returned to a normal conforming condition prior to any further transport.

(ii) Dates and approximate times of occurrences;

UUSA Logistics Planning received notification of this occurrence on July 23, 2018 at approximately 07:07 MST.

(iii) The cause of each component or system failure or personnel error, if known;

The Suspected Cause Investigation concluded the occurrence likely resulted from personnel changing the state of the overpack after the initial inspection was completed, but prior to the shipment departure.

(iv) The failure mode, mechanism, and effect of each failed component, if known;

The overpack design includes 10 locking pins in total. The two halves of the packaging remained secured together during the transport and storage activities of this cylinder despite missing 2/10 locking pins. The overpack retained its proper function and integrity. No equipment mechanisms or components failed during this occurrence.

(v) A list of systems or secondary functions that were also affected for failures of components with multiple functions;

No systems or secondary functions were affected by the missing lock pins.

(vi) The method of discovery of each component or system failure or procedural error;

This occurrence was externally identified and reported to UUSA by GNF-A shipping. UUSA procedure LO-3-2000-01, Receipt and Shipment of Cylinders, was utilized. LO-3-2000-01-F-3, UX-30 Overpack Prior-To-Use Inspection Checklist, documented the performance of the ball lock pin inspection. As previously stated, the suspected cause of this occurrence was personnel changing the state of the overpack subsequent to the initial inspection.

(vii) For each human performance-related root cause, a discussion of the cause(s) and circumstances;

In some instances, Logistics personnel may attempt to compare, categorize, or test fit other parts with those that are in service or storage. It is suspected that an occurrence similar to test fitting other pins in an overpack may have been the cause for the appropriate pins not being in place at the time of transport.

(viii) The manufacturer and model number (or other identification) of each component that failed during the event; and

This event describes 2" ball locking pins.
2" Locking Pin, Avibank # BLC7BC20SL6C8
Columbiana Hi Tech Part Number: X-20-238E-16/17

(ix) For events occurring during use of a packaging, the quantities and chemical and physical form(s) of the package contents.

The cylinder contains 2,235.6 kg of enriched UF6. The proper shipping name would be: RQ, UN2977, Radioactive Material, Uranium Hexafluoride, Fissile, Class 7(6.1, 8)

(Enriched to 20% or less). Packaged in metal cylinders (Type A). Physical form solid, normal form, packaged in USA/9196/B(U)F-96 UX-30 type B protective PSP.

(3) An assessment of the safety consequences and implications of the event. This assessment must include the availability of other systems or components that could have performed the same function as the components and systems that failed during the event.

The remaining 8 lock pins were in place at the time of this occurrence and served to sufficiently ensure the UX-30 overpack performed its intended functions listed in (2)(i). Although the 2 pins not being in place do not conform to manufacturer's direction, there is no safety consequence or further implications due to the remaining pins being available and functional.

(4) A description of any corrective actions planned as a result of the event, including the means employed to repair any defects, and actions taken to reduce the probability of similar events occurring in the future.

A final inspection will be added to the appropriate procedure controlling the shipment of cylinders. This inspection will be performed by either the Container Handling Supervisor or the Lead Container Handler immediately prior to departure to include all labels, placards, general trailer condition, and all ball lock pins. Action Item AC139117 will require that this inspection be added to procedure LO-3-2000-01, Receipt and Shipment of Cylinders.

(5) Reference to any previous similar events involving the same packaging that are known to the licensee or certificate holder.

Letter LES-12-00100-NRC, dated July 20, 2012, details a UX-30 overpack lid lifting lugs not having bolt plugs installed to disable their use during loading and unloading operations. Various other 71.95 reports have been made unrelated to locking pins. These dissimilar reports are available upon request.

(6) The name and telephone number of a person within the licensee's organization who is knowledgeable about the event and can provide additional information.

If you have any questions, please contact Wyatt Padgett, Licensing and Performance Assessment Manager, at 575-394-5257.

(7) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name.

No unexpected exposure of individuals to radiation or to radioactive materials occurred.