Westinghouse Electric Company, LLC
Nuclear Fuel
Columbia Fuel Fabrication Facility
5801 Bluff Road
Hopkins, South Carolina 29061
USA

Attn: Document Control Desk
Director, Division of Spent Fuel Management
Office of Nuclear Material Safety and Safeguards
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Direct tel: (803) 647-3438
Direct fax: (803) 695-4164
e-mail: stilwewe@westinghouse.com

Your ref: Docket No. 71-9196
Our ref: LTR-LCPT-16-12

July 28, 2016

SUBJECT: Event Report - Docket 71-9196, Certificate of Compliance USA/9196/B(U)F-96

Dear Mr. Anthony Hsia:

A written report is hereby submitted pursuant to 10 CFR 71.95(a)(3). The written report is for instances in which conditions of approval in the Certificate of Compliance No. 9196 for the Model No. UX-30 package was not observed in making of shipments on June 1, 2016.

(1) Brief abstract describing the major occurrences

The UX-30 package is used to transport unirradiated uranium, in the form of UF6, with a U-235 mass percentage not to exceed 5 weight percent –defined as USA/9196/B(U)F-96, Revision 29 contents (b)(1)A.

The Certificate of Compliance, USA/9196/B(U)F-96, Revision 29 (and previous revisions), specifies in condition 9(c) that:

> 9 (c) The package shall be prepared for shipment and operated in accordance with the Operating Procedures of Chapter 7 of the application, as supplemented.

Chapter 7 of the application requires uranium hexafluoride packages conform with ANSI N14.1 standard.

ANSI N14.1-2012 Section 8.3.2 (6) requires the cap gasket to be present.

On January 29, 2016, URENCO USA (UUSA) received a shipment of 6 x 30B cylinders from the Westinghouse Columbia facility. On April 9th, an operator at UUSA discovered the valve cap on one of the cylinders was missing the Teflon cap gasket that is to be located in the valve cap.

On June 1, 2016, Westinghouse was informed by UUSA of this non-conformance.

There were no other cylinders in the shipment that had this non-conformance.

This information is provided pursuant to 10 CFR 71.95 (c) (1).

(2) Narrative description of the event

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

The cylinder in question was pressure checked before being shipped and no leak was found upon receipt. Therefore the cap gasket was not required to prevent further leakage.

ii) Dates and approximate times of occurrences;

The cylinder was received at UUSA on January 29, 2016, the non-conformance was discovered by UUSA on April 9, 2016 and the non-conformance was reported to Westinghouse on June 1, 2016.

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

There were no procedural steps that required inspection of the cap gasket component. Therefore, the presence or absence of the cap gasket was not identified.

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

The cap gasket provides a secondary sealing function that would contain UF6 in the case the cylinder valve cap failed. If the valve failed, the gasket would prevent or reduce the amount of UF6 that could be released from the cap. It also prevents debris from entering the valve.

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 absence of the cap gasket; pressure testing passed prior to transport.

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

The missing cap gasket was discovered as part of cylinder connection activities at UUSA.

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

This was not a human performance related root cause.

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

The 30B cylinder and valve were manufactured in accordance with ANSI N14.1.

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

The non-conforming cylinder contained a heel quantity of UF6. The proper shipping name was UN2977, Radioactive Material, Uranium Hexafluoride, Fissile, Class 7 (8) (Enriched to 20% or less). The cylinder was shipped in USA/9196/B(U)F-96, UX-30 PSP.

This information is provided pursuant to 10 CFR 71.95 (c) (2).

(3) Assessment of Safety Consequences and Implications of the Event

The event did not present a safety hazard. The cylinder valve was fully functional and passed pre-shipment pressure testing; therefore the gasket was not needed to prevent leakage.

This information is provided pursuant to 10 CFR 71.95 (c) (3).

(4) Corrective actions planned and taken

- This issue was captured in the Westinghouse corrective action program as CAPAL 100388152.
- Procedures COP-833001, UF6 Cylinder Re-Certification, and COP-833002, UF6 Cylinder Revalving, were modified to have operations check for valve cap gaskets prior to installing new valves on 30B cylinders
- Procedure SOI-U-0286, 30B Cylinder Valve Cap Gasket Inspection, was developed and implemented to check the valve cap gaskets on cylinders that had been processed prior to procedure changes.
- Procedures COP-810096, Cold Pressure Checking of UF6 Cylinder, and COP-810098, UF6 Cylinder installation and Removal, were modified to check for the presence of the cap gasket.
- Communication of this issue was made by internal bulletin to other Westinghouse sites on June 2, 2016 to ensure the issue was address globally.
- Westinghouse also participated in an industry discussion at a recent WNTI UF6 working group so that other consignors of 30B cylinders are aware of the problem and can review their internal procedures.

This information is provided pursuant to 10 CFR 71.95 (c) (4).

(5) Reference to any previous similar events

This was the first reported incident of a missing cap gasket. Following the notification and procedural changes, five (5) cylinders out of seventy nine (79) total in process cylinders inspected were found with missing valve cap gaskets. A new gasket was installed to restore compliance. Additionally, eighty one (81) cylinders that had previously been through cylinder recertification or re-valve process were inspected and no valve cap gaskets were missing or damaged.

This information is provided pursuant to 10 CFR 71.95 (c) (5).

(6) Contact

Please contact Wes Stilwell at (803) 647-3438 for any additional information about this event.

This information is provided pursuant to 10 CFR 71.95 (c) (6).

(7) Extent of Exposure to Radiation

No individuals were exposed to radiation or radioactive material due to this issue. There was no leakage of content due to the non-conformance.

This information is provided pursuant to10 CFR 71.95 (c) (7).

Sincerely,

**** Electronically approved***

Wes Stilwell
Engineering and Regulatory Compliance
WESTINGHOUSE ELECTRIC COMPANY LLC

cc
Nancy Parr, Licensing Manager, Environment, Health, and Safety, Westinghouse
Bruce Phillips, Vice President, Columbia Fuel Operations, Westinghouse
Tony Grange, LCPT Manager, Westinghouse
Pierre Saverot, Project Manager, SFM, NRC

**** Electronically approved records are authenticated in the Electronic Document Management System***