



March 29, 2011
E&L-005-11

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

Reference: Letter dated March 29, 2011 from Columbiana Hi Tech, LLC, request for transfer of US Nuclear Regulatory Commission Certificate of Compliance No. 9196 For the Model No. UX-30 Package

Dear Ms. Ordaz:

Subject: Transfer of and Amendment to US Nuclear Regulatory Commission Certificate of Compliance No. 9196 For the Model No. UX-30 Package

EnergySolutions hereby requests that the subject certificate of compliance currently issued to EnergySolutions be issued to Columbiana Hi Tech, LLC (CHT). In addition, EnergySolutions respectfully submits the attached amendment request for the Model No. UX-30 Safety Analysis Report. We request that you approve our proposed revision to the SAR and revise the Certificate to reflect the changes delineated below.

Transfer of Certificate

The UX-30 was acquired by CHT on March 8, 2011. We request that the certificate be transferred to CHT in conjunction with revision to the SAR, as reflected in the letter from CHT (Reference 1, enclosed).

Safety Analysis Report Amendment

A change has been made to Step 8.2.1.1 of Chapter 8 to the SAR with the entire Chapter being revised and designated as Revision 2. The change concerns the periodic inspection of the UX-30 by the user. The change being requested applies to both the Public and Non-Public versions. Please replace Revision 1 of Chapter 8 with the provided Revision 2. In addition, replace the cover page with the Revision 2 cover page in each version.

The pages of the public SAR revised as a result of the requested changes noted above are included as Attachment 1. The changes have been noted with margin bars identifying the location of changes. Please insert the Attachment 1 pages as replacements for the current public SAR pages.

The pages of the non-public SAR revised as a result of the requested changes noted above are included as Attachment 2. The changes have been noted with margin bars identifying the

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location of changes. Please insert the Attachment 2 pages as replacements for the current non-public SAR pages.

Since this packaging has many foreign users, we request this change be processed as soon as possible to allow time for DOT and foreign endorsements. Also, to allow a reasonable transition period to the new Certificate of Compliance (CoC), we request the following transition period be approved: Revision 25 of the CoC may be used until one year after the date of the approval of the certificate.

The two attachments to this letter are listed below:

Attachment 1 Revised public SAR pages; please replace the current pages with the pages in this attachment. Pages included are: cover, 8-1 through 8-5

Attachment 2 Revised non-public SAR pages; please replace the current pages with the pages in this attachment. Pages included are: cover, 8-1 through 8-5

Should you or members of your staff have questions about the requested SAR revision, please contact Mark Whittaker at (803) 758-1898.

Sincerely,

A handwritten signature in cursive script, appearing to read "Patrick L. Paquin".

Patrick L. Paquin
GM – Engineering & Licensing

Attachments: As stated

Enclosures: CHT letter requesting transfer of the certificate



Attachment 1
Public SAR Pages

SAFETY ANALYSIS REPORT FOR
MODEL UX-30 PACKAGE
PUBLIC VERSION

REVISION 2

March 2011

EnergySolutions
140 Stoneridge Dr.
Columbia, SC 29210

8.0 ACCEPTANCE TESTS AND MAINTENANCE PROGRAM

8.1 Acceptance Tests

ACCEPTANCE TESTS FOR THE 30B OR 30C CYLINDER:

- Acceptance Tests For The 30B Cylinder – Designed and Manufactured per ANSI N14.1 (appropriate edition), “Uranium Hexafluoride – Packaging for Transport”. Acceptance tests for the 30B cylinder shall be in accordance with ANSI N14.1 (appropriate edition).
- Acceptance Tests For The 30B Cylinder – Designed and Manufactured per ANSI N14.1 – 1995, “Uranium Hexafluoride – Packaging for Transport” and ISO 7195:1993(F), “Packaging of Uranium Hexafluoride (UF₆) for Transport”. Acceptance tests for the 30B cylinder shall be in accordance with ANSI N14.1 – 1995 and ISO 7195:1993(F).
- Acceptance Tests For The 30C Cylinder - Designed and manufactured in accordance with Addendum 2-2004 to ANSI N14.1-2001.
- Acceptance Tests For The 30B or 30C Cylinder Used For Transport of a Type B Quantity of UF₆ – in addition to the tests listed above, the cylinder must have a measured leak rate less than 1×10^{-7} cm³/sec. The acceptance leak test of the 30B or 30C cylinder used for reprocessed UF₆ will be performed using Method A.5.4 Evacuated Envelope of ANSI N14.5-1997. The cylinder will be evacuated to a 90% vacuum and then pressurized with helium to approximately 1 psig. The pressurized cylinder is placed in a sealable container connected to a helium mass spectrometer leak detector. The container is sealed and evacuated until the vacuum is sufficient to operate the helium mass spectrometer leak detector and the helium concentration in the container void is monitored. The acceptance criterion is 1.0×10^{-7} atm-cm³/sec of air (leaktight). The detector sensitivity must be less than or equal to 5.0×10^{-8} atm-cm³/sec.

ACCEPTANCE TESTS FOR THE UX-30:

The following acceptance tests are for the UX-30

8.1.1 Visual Inspections and Measurements

8.1.1.1 See Appendix 8.3.1 for acceptance criteria and inspections associated with polyurethane foam manufacturing.

8.1.1.2 Prior to the first use of the package, the following inspection shall be performed:

Dimensional compliance with the drawings referenced in the Certificate of Compliance.

Verify that the packaging is free of cracks, pinholes, or defects that could reduce the effectiveness of the package.

Verify that the packaging is marked in accordance with 10 CFR 71.85 (c).

8.1.2 Weld Examinations

Prior to the first use of overpacks fabricated on or prior to March 31, 2009, all welds shall be visually inspected in accordance with AWS D1.1 PARA 6.9 (statically loaded). Prior to the first use of overpacks fabricated after March 31, 2009, welding shall be performed in accordance with ASME Section III, Subsection NF or Section VIII-Div.1 (as appropriate) and shall be visually inspected in accordance with ASME Section V with acceptance criteria in accordance with ASME Section III, Subsection NF-5000.

8.1.3 Structural and Pressure Tests

None.

8.1.4 Leakage Tests

None.

8.1.5 Component and Material Tests

Prior to the first use of the package, an assembly test showing proper operation of closure interface and all ball-lock pins shall be performed.

8.1.5 Shielding tests

None.

8.1.7 Thermal Tests

None.

8.2 Maintenance Program

MAINTENANCE PROGRAM FOR THE 30B OR 30C CYLINDER:

- 1) Maintenance Program For The 30B Cylinders Manufactured per ANSI N14.1 (appropriate edition), "Uranium Hexafluoride – Packaging for Transport".
 1. Maintenance of the 30B Cylinders shall be performed in accordance with ANSI N14.1 (appropriate edition).

- 2) Maintenance Program For The 30B Cylinders Manufactured In Accordance With ANSI N14.1-1995, "Uranium Hexafluoride - Packaging for Transport" and ISO 7195:1993(F), "Packaging of Uranium Hexafluoride (UF₆) for Transport".
 - ◆ Maintenance of the 30B Cylinders shall be performed in accordance with ANSI N14.1 - 1995 and ISO 7195:1993(F).
- 3) Maintenance Program for the 30C Cylinder.
 - ◆ Maintenance of the 30C Cylinder shall be performed in accordance with Addendum 2-2004 to ANSI N14.1-2001.
- 4) Maintenance Program for 30B or 30C Cylinders Used For Transport of a Type B Quantity of UF₆ -
 - ◆ In addition to the maintenance requirements listed above, the cylinder must have been tested within 12 months prior to shipment to demonstrate a measured leak rate less than 1×10^{-7} cm³/sec. The acceptance leak test of the 30B or 30C cylinder used for reprocessed UF₆ will be performed using Method A.5.4 Evacuated Envelope of ANSI N14.5-1997. The cylinder will be evacuated to a 90% vacuum and then pressurized with helium to approximately 1 psig. The pressurized cylinder is placed in a sealable container connected to a helium mass spectrometer leak detector. The container is sealed and evacuated until the vacuum is sufficient to operate the helium mass spectrometer leak detector and the helium concentration in the container void is monitored. The acceptance criterion is 1.0×10^{-7} atm-cm³/sec of air (leaktight). The detector sensitivity must be less than or equal to 5.0×10^{-8} atm-cm³/sec.

MAINTENANCE PROGRAM FOR THE UX-30:

8.2.1 Structural and Pressure Tests

- 8.2.1.1 Visual inspection of accessible welds shall be carried out within 12 months prior to shipment in accordance with the following requirements.
 - A. Inspection Personnel: Inspection will be performed by personnel trained, examined and certified under a Quality Program having a Written Practice for the training and certification of nondestructive examination personnel.
 - B. Acceptance criteria for fillet and groove welds:
 1. Cracks: Any cracks are unacceptable, regardless of size or location
 2. Pitting (localized holes or cavities): Only surface pitting whose major surface dimension exceeds 1/16 inch (1.5 mm) shall be considered relevant. Pitting is unacceptable if:

- The sum of diameters of random pitting exceeds 3/8 inch (10 mm) in any linear inch of weld or 3/4 inch (19 mm) in any 12 inches (300 mm) of weld, or
- Four or more pits are aligned and the pits are separated by 1/16 inch (1.5 mm) or less, edge to edge

Repairs to welds may be made using a suitable stainless steel welding procedure per the following:

- Welding Personnel: Welding will be performed by personnel trained, examined and certified under a Quality Program having a Written Practice for the training and certification of welding personnel.
- Any rework or repair will be visually inspected with acceptance criteria in accordance with ASME Section III, Subsection NF-5000. Inspection personnel will be trained, examined and certified under a Quality Program having a Written Practice for the training and certification of nondestructive examination personnel.

8.2.1.2 Excessive accumulations of dirt, oil, and other debris shall be removed from the inner and outer surfaces after each use.

8.2.1.3 The dust seal and all rubber pads shall be inspected every 6 months for wear. The dust seal shall be replaced when excessive wear renders the seal ineffective.

8.2.1.4 Inner and outer surfaces shall be inspected for penetrations every 6 months. If any skin failure is observed, these may be repaired using a suitable stainless steel welding procedure. Care should be taken to avoid application of heat for an excessive duration, causing the package to change shape.

8.2.2 Leakage Tests

None.

8.2.3 Component and Material Tests

None.

8.2.4 Thermal Tests

None.

8.2.5 Miscellaneous Tests

8.2.5.1 The following inspections shall be performed to verify acceptability of the foam:

Plastic overpack foam-filling-hole plugs should be removed every 12 months to allow inspection of foam condition for indications of foam deterioration (e.g., presence of solid foam on inside of plug). Verify tight fit of plug after replacement (plug should not turn freely by hand).

Overpacks are to be weighed every 12 months to determine if water has leaked into the overpack. A weight gain of more than 25 pounds per base or lid is reason for rejection (per USEC-651, "Uranium Hexafluoride: A Manual of Good Handling Practices", DOE Field Office, Oak Ridge).

- 8.2.5.2 In addition to the requirements of Section 7.1.1.3 to check the ball-lock pins before each use, the pins shall also be checked for proper operation annually.

This annual check shall consist of at least:

1. Depressing the push button and verifying the ball locks operate properly and that the push button retracts when it is released.
2. Inserting each pin into a receptacle on the UX-30 and verifying that it properly locks into place
3. Cleaning each pin by wiping it down with a clean cloth and, if necessary, lubricating it with a clean lightweight oil such as WD-40.

Malfunctioning ball-lock pins identified during this annual maintenance shall be immediately removed from service.

8.3 APPENDIX

8.3.1 Polyurethane Foam Specification ES-M-170

(Proprietary)



Attachment 2
Non-Public SAR Pages