

April 7, 2011

Mr. William M. Arnold, President
Century Industries
P.O. Box 17084
Bristol, VA 24209

SUBJECT: REVISION NO. 4 OF CERTIFICATE OF COMPLIANCE NO. 9342 FOR THE
MODEL NO. VERSA-PAC PACKAGE

Dear Mr. Arnold:

As requested by your application dated March 22, 2011, enclosed is Certificate of Compliance No. 9342, Revision No. 4, for the Model No. Versa-Pac package. Changes made to the enclosed certificate are indicated by vertical lines in the margin. The staff's Safety Evaluation Report is also enclosed.

The approval constitutes authority to use the package for shipment of radioactive material and for the package to be shipped in accordance with the provisions of 49 CFR 173.471. Those on the attached list have been registered as users of the package under the general license provisions of 10 CFR 71.17 or 49 CFR 173.471.

If you have any questions regarding this certificate, please contact me or Pierre Saverot of my staff at (301) 492-3408.

Sincerely,

/RA/

Michael Waters, Chief
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9342
TAC No. L24526

Enclosures: 1. Certificate of Compliance
No. 9342, Rev. No. 4
2. Safety Evaluation Report
3. Registered Users

cc w/encls 1 & 2: R. Boyle, Department of Transportation
J. Shuler, Department of Energy
Registered Users

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Distribution: (Closes TAC No. L24526)

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ADAMS Package No.: ML111020147

OFC:	SFST		SFST		SFST		SFST					
NAME:	PSaverot		MGordon		DPstrak		MDeBose		MWaters			
DATE:	04/04/2011		4/4/11		4/4/11		4/6/11		4/7/11			

C = COVER

E = COVER & ENCLOSURE

N = NO COPY

OFFICIAL RECORD COPY

SAFETY EVALUATION REPORT
Model No. Versa-Pac Package
Certificate of Compliance No. 9342
Revision No. 4

SUMMARY

By application dated March 22, 2011, Century Industries submitted an amendment request for the Model No. Versa-Pac package. The applicant did not request any changes to the package design, but requested new packing materials.

EVALUATION

By application dated March 22, 2011, Century Industries submitted an amendment request for Certificate of Compliance (CoC) No. 9342 for the Model No. Versa-Pac package. The applicant did not request any design changes to the package.

The package is designed to transport uranium materials and TRISO fuel with various packing materials. The applicant requested that Aluminum Trihydrate $\text{Al}(\text{OH})_3$ and Sodium Borate (Borax, fused) $\text{Na}_2\text{B}_4\text{O}_7$ be authorized as additional packing materials.

Aluminum Trihydrate is an inert, semi-abrasive, material which decomposes before melting and is not self-igniting. Sodium Borate is a stable material, partially soluble in water, which forms partial hydrate in moist air, in which case hydrated Borax could then form a limited quantity of boric acid.

The applicant stated that, at higher temperatures, i.e., above 200°C, Aluminum Trihydrate and Sodium Borate will release water vapor (steam) and precautions must be taken to dissipate the vapor and any pressure that may be generated to prevent damage or explosion in the enclosed containment vessel of the package. The Model No. Versa-Pac package's containment and overpack include plastic plugs which will somewhat melt during such accident conditions while the steam will be forming at approximately the same time. The applicant stated that, if the plugs have not entirely melted before an off-gas steam build-up, any pressure resulting from the steam decomposing off the new packing materials will "push out" the half-molten plastic plugs before yielding the steel containment vessel.

The staff finds that the change requested by the applicant to the Model No. Versa-Pac package as previously approved is acceptable. The required documentation is available and complete.

Changes to Certificate of Compliance

The following change is included in Revision No. 4 to Certificate of Compliance No. 9342:

Condition No. 5(b)(1) was updated to include Aluminum TriHydrate and Sodium Borate as authorized packing materials.

The expiration date of the certificate was not modified.

The March 22, 2011, submittal was included in the References section.

CONCLUSION

Based on the statements and representations in the application, the staff has reviewed the proposed changes for the Model No. Versa-Pac package. The staff concludes that the changes indicated do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9342, Revision No. 4,
on April 7, 2011