

January 24, 2012

Mr. Pierre M. Saverot – Project Manager  
Office of Nuclear Material Safety and Safeguards  
Mail Stop: EBB-3D-02M  
United States Nuclear Regulatory Commission  
Executive Boulevard Building  
6003 Executive Boulevard  
Rockville, Maryland 20852

**RE: Revised Amendment Request to Certificate of Compliance No.  
USA/9342/AF-96 Revision 5, Model No. Versa-Pac Package, Docket No. 71-  
9342 and Revision to the Safety Analysis Report, Revision 5**

Dear Mr. Saverot,

Century Industries would like to thank you for the opportunity to submit this request for revision of the Versa-Pac Shipping Container Safety Analysis Report and Certificate of Compliance No. 9342.

Certificate Number	Model Number
USA/9342/AF-96	VP-55 & VP-110

In support of the requested revision Century Industries is providing two copies on CD of the updated Safety Analysis Report Revision 6, dated 12-28-11 for your review. We are also submitting a Record of Revisions to the SAR to aide in review of the changes made to the report. The revisions include updates and adjustments to the licensing drawings, inclusion of the items recently approved by Letter of Revision to CoC Rev. 5 and general housekeeping, corrections in spelling and pagination in the document.

Century Industries requests the following:

1. Revise paragraph 5.(b)(1) to include as allowable contents materials such as paper labels, plastic tape, poly bottles, plastic bags, and desiccant (e.g. Quik Solid), all of which have an auto-ignition temperature greater than the average temperature of the containment vessel surface boundary of 360.4°F.

Based on the thermal analysis previously submitted, we have interpolated and integrated the payload temperatures and found that the weighted payload temperature is 360.4°F at 22 minutes into the cool-down period, post fire, where

the highest payload temperature occurred. The calculated weighted payload temperature of 360.4°F is far below the auto-ignition temperature for paper and plastics. Auto-ignition, interactions among contents and packaging and contents in the package shall be in accordance with the requirements of 10 CFR 71.43(d). Please see the revisions in the SAR for justification.

2. Adjust the melting point requirement.

Having verified that the radioactive contents have melting points above 600°F and there is no melting of the radioactive contents, that although the container has no pressure relief system, any gases that might be produced in a fire event would be vented through four holes between the containment and insulation surrounding the containment. Any increase in pressure due to melting of packing material during an HAC fire event would be vented to the atmosphere and be released through the plastic vent plugs, which would melt during any thermal event prior to the yielding of the steel containment vessel. Therefore, no significant impact on the containment system of the Versa-Pac Type AF package would occur and the need to restrict the melting point is limited and required only for the radioactive contents in the package. Please see the revisions in the SAR for justification.

3. In the case where packages are not intended for reuse, and then either buried or destroyed upon reaching their destination, allow the use of the neoprene rubber bottom containment pad and neoprene sponge rubber top containment pad to be optional. The neoprene pads serve the purpose of protecting the inner containment wall for packages during repeated use. The previous thermal analysis is not affected and continues to be bounding.

Requested wording for Certificate of Compliance Revision:

5(a)(2) – Paragraph 2:

*The exterior skin of the packaging is a UN1A2/X400/S minimum, 16 gauge carbon steel material for the Model No. VP-55 and a UN1A2/Y409/S minimum, 16 gauge carbon steel for Model No. VP-110.*

5(a)(3) Drawings;

*The packaging is constructed and assembled in accordance with Century Industries Drawing Nos.:*

*VP-55-LD-1 Rev. No. 8, VP-55-LD-2 Rev. No. 10 Sheets 1 of 2 and 2 of 2.*

*VP-110-LD-1 Rev. No. 8, VP-110-LD-2 Rev. No. 8 Sheets 1 of 2 and 2 of 2.*

5(b)(1)(ii): Type and From of Material

*TRISO fuel which is C/SiC/C coated ThUC<sub>2</sub> particles pressed with a carbon matrix to form rods.*

*Contents may be pre-packaged in polyethylene, polytetrafluoroethylene, aluminum, and carbon steel per Table 1-4 of the application Aluminum Trihydrate, Sodium Borate (Borax, fused), perlite, paper labels, plastic tape, plastic bags, plastic bottles and desiccant (e.g. Quik-Solid) are also authorized as packing materials. The hydrogenous material load (in the form of paper and plastics, etc.) is limited to a total of 200 grams per package.*

*Neoprene rubber vessel bottom pad (Item number GC) and top vessel neoprene sponge rubber pad (Item number GE) are optional for packages that are not intended for reuse.*

*Materials with a hydrogen density greater than 0.141 g/cm<sup>3</sup> are not authorized.*

*Melting point limitation of 600°F is required only for the radioactive contents in the package.*

*The package and its contents shall be in accordance with the requirements of 10 CFR 71.43(d).*

We are presently anticipating an order for additional packages from a current customer that are dependent upon successful completion of this revision request and would respectfully request review be granted priority to meet an end of January, 2012 date.

If you or your staff have any questions, or need any additional information, please let me know.

Respectfully,



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