ENERGYSOLUTIONS

January 28, 2016
ES/NRC 16-003
Docket No. 71-9168

ATTN: Document Control Desk
Director, Division of Spent Fuel Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: **Request to Amend Certificate of Compliance No. 9168, Revision 22 for the Model No. 8-120B Package**

References: (1) Certificate of Compliance 9168, Docket No. 71-9168, Revision 22.

Energy*Solutions* (ES) hereby submits an application to U.S. Nuclear Regulatory Commission (NRC) to amend the Certificate of Compliance (CoC) for the Model 8-120B Package (Ref. 1). This license amendment request expands the description of the "dewatered" resin contents to include "grossly dewatered resin", where grossly dewatered resin is an industry term applied to resins that have not been processed to reduce the water content further than that which can be obtained by pumping water out of the liner until the pump loses suction. ES seeks to add this term to the allowed contents specification to more clearly communicate to users as to the acceptability of grossly dewatered resins as an 8-120B payload.

ES has evaluated the safety impacts of variable water content in resin, as might occur in the range between "dewatered" and "grossly dewatered" resins. For the 8-120B package, the percentage of free water in the resin does not impact any of the existing safety analyses, nor would resin water content in this range create any conditions that would merit additional safety analyses.

- There is no impact on the package gross weight because the same payload weight limits apply to both dewatered and grossly dewatered resins.
- There is no impact on the structural analyses because there are no changes to the allowable contents weight, and no changes to the behavior of the payload that affect safety.
- There is no impact to the thermal performance of the package because the thermal analyses already account for vapor pressure due to free water (the amount of free water does not impact the overall vapor pressure).
- There is no impact to the flammable gas concentrations because there is no change to the method for determining compliance or the acceptance criterion.
- There is no impact to the containment analyses because the containment analysis was

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performed for powdered solids and activated metal.

- The shielding analysis is not affected by the density differences between dewatered and grossly dewatered resins because the allowable source terms for resin are based on Table 7-1, Column 2, which has units of γ/sec·g.

- There are no operational differences between dewatered and grossly dewatered resins.

A summary of the specific proposed changes to the 8-120B SAR is provided in Attachment 1 of this letter. Enclosure 1 contains one (1) paper copy of the non-public version of the revised SAR that contains security-related sensitive information that should be withheld under 10 CFR 2.390. Enclosure 2 contains one (1) paper copy of the public version of the revised SAR in which all security-related sensitive information is redacted.

Should you or any member of your staff have questions, please contact me at (408) 558-3509.

Sincerely,

Steven E. Sisley
Cask Licensing Manager

cc) Pierre Saverot, USNRC, NMSS/DSFM/SFLB
Mark Lewis, Energy*Solutions*
Dan Shrum, Energy*Solutions*

Summary of Changes, Safety Analysis Report For Model 8-120B Type B Shipping Packaging, Consolidated Revision 10

Section	Page(s)	Change	Purpose
1.2.2.1	1-5	Revised 1st bullet to include "or grossly dewatered resins" and added footnote 1.	Expanded contents definition.
1.3	1-7	Change revision number of drawing C-110-E-007 from 21 to 22.	Revision 22 of drawing was included in Revision 22 of the CoC. The SAR has been updated to include the latest drawing revision.
1.3	---	Revised SAR to include Dwg. No. C-110-E-0007, Rev. 22.	Revision 22 of drawing was included in Revision 22 of the CoC. The SAR has been updated to include the latest drawing revision.