

June 28, 2011

MEMORANDUM TO: Doug Weaver, Deputy Director
Licensing and Inspection Directorate
Division of Spent Fuel Storage and Transportation, NMSS

FROM: Pierre Saverot, Project Manager **/RA/**
Licensing Branch
Division of Spent Fuel Storage and Transportation, NMSS

SUBJECT: SUMMARY OF JUNE 7, 2011, MEETING WITH
ENERGYSOLUTIONS REGARDING THE 10-160B PACKAGE

Background

EnergySolutions (ES) will submit, in September 2011, an amendment request for the use of a source insert in the Model No. 10-160B package to transport radioactive sources from Sandia National Laboratory (SNL) to the Nevada National Security Site (NNSS). ES requested this pre-application meeting to present its technical approach and proposed schedule.

Field C

Discussion

Sandia National Laboratories (SNL) Gamma Irradiation Facility (GIF) desires to remove 48 Co-60 sources (manufactured by Neutron Products, Inc.) with a total activity of 10,000 Ci from the site, and dispose of them at the Radioactive Waste Management Facility at Nevada National Security Site (NNSS). ES is designing a cask insert that will (i) accept a pre-loaded basket (with the 48 sources), (ii) allow remote handling activities supporting package loading and unloading, (iii) allow remote underwater loading and unloading activities, and (iv) include integrated attachment points and integrated draining/venting mechanisms. ES is requesting an expedited review and issuance of a revised Certificate of Compliance (CoC) in December 2011 to fabricate and deliver the basket/insert to SNL in March 2012 for loading into the Model No. 10-160B package and transport to NNSS that same month, i.e., March 2012.

The estimated weight of the additional gamma shield insert is about 7,000 pounds. ES will perform a lifting analysis of the insert using ANSI N14.6. ES intends to show that the insert lid will remain attached to the body under hypothetical accident conditions (HAC) and that the insert will not damage the package under HAC. ES will ignore the shoring material inside the package for the thermal analyses and consider that radiation, and conduction through the interstitial air, are the only means of heat transfer between the insert and the package. ES said that there is no gas generation from radiolysis and that the insert cavity will be vacuum-dried. Regarding the shielding evaluation, ES will assume that the material is distributed in the cavity for normal conditions of transport while it will be considered as a point source for HAC. Likewise, the source insert will be allowed to move and the impact limiters will be ignored for HAC.

ES intends to submit, in September 2011, a stand-alone addendum to the current Safety Analysis Report (SAR) to show that regulatory structural, thermal, and shielding requirements are satisfied with the design of the source insert and the addition of the new contents. There will be no change to the current SAR; the addendum will refer to the SAR for other sections of the application such as containment, package maintenance requirements, etc.

Staff indicated that (i) there is a small lead gap in the Model No. 10-160B package that may become significant if shoring is not considered during HAC, and (ii) a sensitivity analysis is required if wood is used for shoring because of the variations of wood's properties. ES said that the analysis will show that the insert does not deform or break but that its position changes since shoring fails during HAC. Regarding the lead slump in the package, ES said that it will assume that it is at the top of the package (in the lid recess plug) so that there is no significant effect due to streaming paths. Staff reminded ES to look at "hot spots" to prevent any streaming path and ES agreed to identify them, if any.

ES agreed to staff's suggestion for a second pre-application meeting, before the submittal of this amendment request, in order to present more detailed information up-front due to the tight proposed review schedule. The staff did not make any regulatory commitments at the meeting.

Docket No. 71-9204
TAC No. LA0129

Enclosure 1: Meeting Attendees
Enclosure 2: Presentation

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ADAMS Package No. ML111860102

<u>Distrib</u>	SFST	E	SFST	C	SFST			
NAME	PSaverot		MDeBose		MWaters			
DATE	06/16/2011		06/16/2011		06/28/2011			

C=Without attachment/enclosure E=With attachment/enclosure N=No copy **OFFICIAL RECORD COPY**

**Meeting Between EnergySolutions and the
Nuclear Regulatory Commission
June 7, 2011
Meeting Attendees**

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