

September 17, 2012

MEMORANDUM TO: Doug Weaver, Deputy Director
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 AUGUST 28, 2012, MEETING WITH J.L. SHEPHERD &
ASSOCIATES TO DISCUSS FINDINGS FROM THE ACCEPTANCE
REVIEW FOR THE MODEL NO. BU650B

Background

A pre-application public meeting was held on May 30, 2012, at the request of J.L. Shepherd & Associates (JLS&A) to discuss the design of the new transportation package, Model No. BU650B. During that meeting, staff explained (i) the importance of benchmarking an analytical approach reflecting the modeling attributes used in the design, (ii) the need for sensitivity analyses, (iii) the need to evaluate the worst configuration of the package, and (iv) the importance of properly addressing the deformation of the shielded liner from the hypothetical accident conditions (HAC) tests.

On June 29, 2012, JLS&A submitted an application for Certificate of Compliance No. 9363 for the Model No. BU650B package. Staff performed an acceptance review of the JLS&A application and then invited JLS&A to a public meeting to discuss some of the open technical issues resulting from the initial review of the application.

Discussion

The staff said that it had identified a number of significant deficiencies in the application, including the following: dimensions used in the shielding analyses are inconsistent with those shown on the licensing drawings, lead slump is not considered in the analysis while staff calculated a 3.2" gap at the top of the lead layer under HAC, thermal analyses did not consider the effect of a covered conveyance, and the application does not provide any data to demonstrate that the modeling approach is properly benchmarked to simulate the package structural performance for the 30-ft drop and puncture drop tests.

The staff also explained in detail the rationale for its findings, i.e., deviations from the ASME Code, discrepancies between the licensing drawings and the materials properties that were indicated in several sections of the application, incorrect statements regarding stress acceptance criteria, "strain based" design criteria which are not recognized in a stress evaluation, lack of benchmarking for the modeling approach (not the computer code itself) to provide for an adequate finite element analysis numerical simulation of the drop tests, allowing plastic strains to develop in the closure bolts, non-evaluation of the shield liner subject to a high impact deceleration g-load upon a one-meter free-drop, lack of description of the physical burn

test and the test data/results, not providing input and output ANSYS files used in the thermal analysis, not considering a thermal analysis at NCT for the effects of the covered conveyance, not performing a shielding analysis under HAC and not demonstrating the absence of lead slump and lead shrink in the lead layer, not providing acceptance criteria for foam testing or for the Kaolite material.

When JLS&A said that they did not include details of lead pour for proprietary reasons, staff stated that all information required for a package review shall be included in an application and that proprietary information is adequately dealt with on a daily basis at the NRC. When JLS&A said that they have drop test results for DOT 7A packages that could show any void or lead slump after testing, DOT intervened to say that a DOT 7A test cannot apply to a Type B package standard and that Type A criteria are not interchangeable with a Type B package shielding evaluation under HAC tests. Staff concurred and said that this looks like a difficult path to approval. Staff also said that calculation of dose rate based on a linear attenuation is not acceptable. Staff indicated that there was no valid data pertaining to the structural analysis to look at and that JLS&A should have presented justifications for strain-based performance because some of the package components are sacrificial. JLS&A responded that except for the liner everything else is sacrificial. Staff pointed out missing information as well as inconsistencies in Tables 2-3 and 2-19 and reiterated the importance of following the sequence of tests specified in the regulations.

Staff told JLS&A that a formal letter "Application Not Accepted for Review" will be mailed soon after the meeting and include open technical issues identified by staff for JLS&A consideration. Staff said that the list of open technical issues should not be considered all inclusive, and that JLS&A should holistically revise the application to meet regulatory requirements. Staff did not make any regulatory commitments at the meeting.

Docket No. 71-9363

TAC No. L24659

Enclosure: Meeting Attendees

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Distribution:
NRC Attendees
G:\SFST\Saverot\71-9363 BU650B\MEETING SUMMARY

ADAMS P8 MEMO No.: ML12262A351

OFC	SFST	SFST	SFST
NAME	PSaverot	MDeBose	BHWhite for MWaters
DATE	09/06/2012	09/11/12	9/17/2012

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**August 28, 2012, Public Meeting
Between J.L. Shepherd & Associates and
the Nuclear Regulatory Commission**

MEETING ATTENDANCE LIST

Mark Lombard	NRC/SFST	301-492-3300
Doug Weaver	NRC/SFST	301-492-3305
David Tang	NRC/SFST	301-492-3328
Pierre Saverot	NRC/SFST	301-492-3408
Joe Borowsky	NRC/SFST	301-492-3563
Zhian Li	NRC/SFST	301-492-3235
Sara De Paula	NRC/SFST	301-492-3225
Michele Sampson	NRC/SFST	301-492-3292
James Williams	DOT	202-366-6177
Richard Boyle	DOT	202-366-6177
Que Pho	JLS&A	818-898-2361
Martin Brownstein	JLS&A	865-607-0691
William Brown	JLS&A	818-898-2361

Enclosure