

September 1, 2010

MEMORANDUM TO: Doug Weaver, Deputy Director  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

FROM: Jennie Rankin, Project Manager */RA/*  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: SUMMARY OF AUGUST 25, 2010, PRE-APPLICATION MEETING  
WITH AREVA REGARDING THE LANL-B NEW PACKAGE DESIGN

Background. On August 25, 2010, a meeting was held in Rockville, Maryland, at the request of AREVA Federal Services, LLC (AREVA) to discuss the LANL-B package which is a new package design used as part of the Global Threat Reduction Initiative. No regulatory decisions were requested nor made at the meeting. The list of meeting attendees is Enclosure 1. A detailed agenda provided by AREVA at the meeting is Enclosure 2. Presentation slides are Enclosure 3.

Discussion. The discussion addressed the items identified in the agenda.

- **Package Discussion.** The LANL-B package will be used to transport two types of payloads: the IAEA's Long Term Storage Shield (LTSS) and intact medical device/irradiators holding sources. The top and bottom of the package have an aluminum honeycomb section and the bottom of the package is equipped with a polyurethane foam impact limiter to protect from direct impact to the sealing flange. The LTSS and medical device/irradiator payloads both provide shielding for the sources. The package does not provide shielding due to a gross weight limit restriction in the applicant's contract with Department of Energy (DOE). The LTSS payload is carried within a custom lodgment that is loaded into the package. The medical device/irradiator payload is carried within an inner container that is loaded into the package.
- **Test Plan.** AREVA stated the test plan is still under development; however, the safety demonstration will be primarily by a full-scale test using some analysis. Accelerometers or high-speed photometry may be used for collecting test results and LS-Dyna calculations will be utilized to determine worst-case scenarios.
- **Schedule.** The applicant plans to complete full scale certification tests by March 2011, plans to submit the application by May 2011, and complete the submittal of Request for Additional Information (RAI) responses by November 2011. The applicant is aiming for a Certificate of Compliance (CoC) issue date of March 2012.

- Staff requested the applicant to consider:
  - Using more than one test unit for performing multiple 30-foot drop tests to preclude the risk of leak test failure due to superfluous drops.
  - Providing detailed modeling to assist in qualifying the aluminum honeycomb material properties.
  - Evaluating the effects of the ½" axial gap between the payload and the containment boundary to ensure the gap does not affect closure lid performance.
  - Providing detailed information which includes drawings and structural analysis needed if the applicant relies on the integrity of the storage housing of the medical device/irradiator payload for shielding purposes. The applicant stated drawings can be provided for a majority of the devices, but not all the drawings are attainable. The applicant also stated that 70 devices are currently registered and can be grouped together to aid in the analysis. To preclude subsequent amendments, staff noted that since the medical device/irradiator payloads are used primarily in the United States, the incorporation of shielding into the package design may still be within the legal truck weight limit.
  - Factoring the following into the planning; that the proposed 10 month schedule from application submittal to CoC issuance is aggressive. Staff noted to the applicant that the average overall time for reviewing a new package design given one round of Request for Supplemental Information (RSI), and one round of RAI is 1.5 years. In addition, the NRC internal metric for reviewing an application is 7.4 months, which leaves the applicant approximately 2.6 months to respond to RSIs and RAIs.
  
- Next Steps. The pre-application meeting identified two areas of concern that warrant additional discussion. The applicant and NRC agree that two focused meetings to discuss shielding analysis and the testing plan would benefit the application. The applicant stated the focused meetings would occur prior to January 2011.

Docket No. 71-9355

TAC No. L24464

Enclosures: 1. Attendees  
2. Agenda  
3. Handouts

- Staff requested the applicant to consider:
  - Using more than one test unit for performing multiple 30-foot drop tests to preclude the risk of leak test failure due to superfluous drops.
  - Providing detailed modeling to assist in qualifying the aluminum honeycomb material properties.
  - Evaluating the effects of the 1/2" axial gap between the payload and the containment boundary to ensure the gap does not affect closure lid performance.
  - Providing detailed information which includes drawings and structural analysis needed if the applicant relies on the integrity of the storage housing of the medical device/irradiator payload for shielding purposes. The applicant stated drawings can be provided for a majority of the devices, but not all the drawings are attainable. The applicant also stated that 70 devices are currently registered and can be grouped together to aid in the analysis. To preclude subsequent amendments, staff noted that since the medical device/irradiator payloads are used primarily in the United States, the incorporation of shielding into the package design may still be within the legal truck weight limit.
  - Factoring the following into the planning; that the proposed 10 month schedule from application submittal to CoC issuance is aggressive. Staff noted to the applicant that the average overall time for reviewing a new package design given one round of Request for Supplemental Information (RSI), and one round of RAI is 1.5 years. In addition, the NRC internal metric for reviewing an application is 7.4 months, which leaves the applicant approximately 2.6 months to respond to RSIs and RAIs.
  
- Next Steps. The pre-application meeting identified two areas of concern that warrant additional discussion. The applicant and NRC agree that two focused meetings to discuss shielding analysis and the testing plan would benefit the application. The applicant stated the focused meetings would occur prior to January 2011.

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MEETING ATTENDEES  
Meeting Between the Nuclear Regulatory Commission  
and AREVA Federal Services, LLC  
August 25, 2010

David Tang	NRC/SFST
Meraj Rahimi	NRC/SFST
Michele Sampson	NRC/SFST
Chris Staab	NRC/SFST
Jennie Rankin	NRC/SFST
Zeechung Wang	NRC/RES
Joe Borowsky	NRC/SFST
Ata Istar	NRC/SFST
Neil Day (via telecon)	NRC/SFST
Phil Noss	AREVA
Ron Burnham (via telecon)	AREVA
Richard Smith	AREVA
Alec Ross	AREVA
Ioanna Iliopoulos	NNSA
Abigail Cuthbertson	NNSA
Darcy Campbell	NNSA
John Zarling	LANL
Mike Pearson	LANL
Julia Whitworth	LANL
Jim Shuler	DOE
Dwaine Brown	DOE
Charles Myers	EAGLE RESEARCH

AGENDA

LANL-B Package, NRC Docket 71-9355

Meeting Between AREVA Federal Services LLC and  
Nuclear Regulatory Commission

August 25, 2010

1. Introductions
2. Meeting Objectives
3. Description of the LANL-B Packaging
4. Description of the payloads
5. Licensing Approach
6. Preliminary Analysis Results

Enclosure 3  
AREVA Pre-Application Meeting Slides