NRC FORM 699 (9-2003) U.S. NUCLEAR REGULATORY COMMISSION

CONVERSATION RECORD

DATE: 01/12/2010

TIME: 9:00am

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU	TELEPHONE NO.
Mark Whittaker, Mirza Baig	803-758-1846

ORGANIZATION: EnergySolutions

SUBJECT: Proposed Responses to Thermal RAIs - Model No. 3-60B package

TYPE OF CONVERSATION
- ☐ VISIT
- ☐ CONFERENCE
- ☑ TELEPHONE
  - ☐ INCOMING
  - ☑ OUTGOING

SUMMARY *(Continue on Page 2)*

NRC Attendees: Haile Lindsay, Chris Bajwa, Mike Waters, Pierre Saverot

Staff had requested the applicant to provide the basis for the determination that 2 gallons of water remaining in the cask cavity is a conservative assumption for the evaluation of hydrogen generation (RAI 3-2). The applicant said that it is confident that the design of the cask will "result in very little water" being retained in the cavity after draining, and that every cask will be tested after fabrication (there will be a statement to that effect in Chapter 8.) Staff stated that there may be a disconnect between acceptance criteria (for the fabrication of the package) and a test since the user has to make an assessment of how much water is contained in a specific payload (through its knoweldge of the waste contents, measurement parameters and engineering judgment) and then add 2 gallons to calculate the hydrogen generated. The applicant said that it will provide a demonstration that 2 gallons of water in the package is a worst case value based on tolerances during the fabrication process.

Regarding RAI 3-4, the staff said that it noticed that there was little to no gradient across the fire shield, outer shell and inner shell of the package and that this was unexpected. The applicant explained its findings, i.e., the finite element model incorporates all heat transfer phenomena with a predicted temperatutre of 1331 degrees F that "seems reasonable." Staff requested the applicant to include, in its answer to RAIs 3-4 and 3-7, a plot of the temperature gradient and the applicant agreed. Staff also said that it was not as optimistic as the applicant on the results from the model: staff has no idea as to how the model was built because the applicant provides only a database file as a "blackbox".

Regarding RAI 3-6, the applicant explained the conditions of the heat input (fire is coming from every direction on the entire length of the fire shield, the 1/2" casing of the impact limiters is empty during the fire, etc.) and staff said that if the foam is left in the impact limiters, the condtions are not conservative because more heat is put into the package. Staff and the applicnt discussed the fire conditions and agreed on the heat input process.

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ACTION REQUIRED

None

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Pierre Saverot		01/13/2010

ACTION TAKEN

TITLE OF PERSON TAKING ACTION	SIGNATURE OF PERSON TAKING ACTION	DATE