


<b>NRC FORM 699</b> (9-2003)		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		DATE 09/14/2011
<b>CONVERSATION RECORD</b>				TIME 10:00 PM
NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU See below		TELEPHONE NO. 888-790-3721		TYPE OF CONVERSATION <input type="checkbox"/> VISIT <input type="checkbox"/> CONFERENCE <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input checked="" type="checkbox"/> OUTGOING
ORGANIZATION Constellation				
SUBJECT Discussion Revised RAI O-2, Licence Renewal RAI2				
SUMMARY (Continue on Page 2) NRC- John Goshen, Joe Borowsky CNWRA - Asad Chowdhury, Lynn Tipton Constellation - Ken Greene, John Jassari  RAI O-2 was revised to provide additional clarity. Discussed with Constellation staff. Constellation requested a 60 response time for the RAI which is acceptable. Constellation will discuss draft responses with NRC and CNWRA staff prior to formal submittal.  O-2 Provide detailed step-by-step calculations to justify the response to the NRC RAI O-3 presented in the June 28, 2011, letter to the NRC.  The staff has reviewed the response and has determined that further clarification identified below is necessary in order to effectively evaluate the licensee's RAI response. The staff comments are based on review guidance from NUREG 1567, "Standard Review Plan for Spent Fuel Dry Storage Facilities", which contains details on the parameters necessary to perform calculations, such as number of casks, fuel assemblies and rods, total surface area of fuel assemblies and rods, activity, release fractions, source term to dose rate calculation, and X/Q parameters for crud, fines, volatiles, and fission gases. Gas/volatiles compounds treated as particulates should be considered as a fine.  Fines and crud should be included in the analysis considering that lower welds have a leak rate of approximately 1E-3 cc/sec (per the Final Safety Analysis Report (FSAR)). The calculations appear to be based on a leak rate of 1E-4 cc/sec rather than 1E-3 cc/sec, which is the sensitivity of the bubble leak test for bottom, girth, and longitudinal welds. The various leak rates used in the calculations (1E-3 cc/sec, 1E-4 cc/sec, and 1E-7 cc/sec per RAI Response O-4) should be noted and explained. The licensee should also provide the calculation for the "size penetration" (e.g., hole size). Staff calculations show a hole size much larger than 10 $\mu$ m for leak rates of 1E-4 cc/sec and 1E-3 cc/sec. Additionally, the basis for the "Cask to HSM" fractions should be stated explicitly. Values of 0.05 and 0.0008 for volatiles, 0 and 0.02 for fines, and 0 and 0.02 for crud do not appear reasonable. <b>Continue on Page 2</b>				
ACTION REQUIRED None				
NAME OF PERSON DOCUMENTING CONVERSATION John Goshen		SIGNATURE 		DATE 09/14/2011
ACTION TAKEN				
TITLE OF PERSON TAKING ACTION		SIGNATURE OF PERSON TAKING ACTION		DATE

**CONVERSATION RECORD (Continued)****SUMMARY** *(Continue on Page 3)*

Considering the convection heat transfer taking place within the HSM (this convection is the basis for heat removal), the factors should be approximately 1, especially for small particles. Fines and crud must be included in the calculations. Further, the calculations for normal, off-normal and accident conditions should use the release fractions discussed in NUREG-1567.

Recognizing this is a 40 year license renewal, a second site dose calculation should consider the effect of the remaining DSCs based on more stringent helium leak rate tests mentioned in the June 28, 2011, RAI Response O-4.

This is required to evaluate compliance with 10 CFR 72.104, 10 CFR 72.106, 10 CFR 72.122(h) and 10 CFR 72.126(d).

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