

NOTE TO: FILE

DOCKET NO: 71-9212

SUBJECT: 1/20/15, 1:30PM, CONFERENCE CALL WITH NUCLEAR WASTE PARTNERSHIP, LLC AND U.S. DEPARTMENT OF ENERGY TO DISCUSS REQUESTS FOR SUPPLEMENTAL INFORMATION and OBSERVATIONS ON THE RH-TRU 72B TRANSPORTATION PACKAGE

Participants:

<u>NRC/NMSS/DSFM</u>	<u>Nuclear Waste Partnership, LLC</u>	<u>U.S. Department of Energy</u>
Huda Akhavannik	Robert Johnson	James Rhoades
Veronica Wilson	Todd Sellmer	
Jorge Solis	Brad Day	
	Murthy Devarakonda	
	Steve Porter	

Nuclear Waste Partnership, LLC (NWP) and the U.S. Department of Energy (DOE) requested a teleconference to discuss their future responses to requests for supplemental information sent in a letter dated, December 19, 2014. NWP began by discussing the thermal observations made on the package regarding the effect of convection on gaps in the package. To address this, NWP indicated that they would include references and/or analyses that would demonstrate that during HAC, any effects from convection would be of little consequence and so it is reasonable to ignore any gaps in the package. Additionally, a thermal observation was made on why polyurethane foam is used as surrogate material to determine decay heats of the payload. NWP indicated that this foam is an insulator and would provide a conservative upper bound on temperature.

Next, the requests for supplemental information made in the shielding section were discussed. NWP indicated that the analysis that they submitted was very similar to another DOE package, the TRUPACT-II, and were surprised by the nature of the questions. Staff indicated that they would review the responses and safety evaluation that was done for the TRUPACT-II. In response to the first request for supplemental information, NWP indicated that it would use the same analysis that was done but expand it over the range of energies for both gammas and neutrons for both concentrated and distributed sources under normal conditions of transport and hypothetical accident conditions to justify that the normal conditions of transport activity limits at 2 m are bounding. For the second request for supplemental information, NWP indicated that Zirconium – 40 was found to be an appropriate material to account for self-attenuation when compared to other materials with different densities and that they would submit the details from the analyses supporting this conclusion. For the third request for supplemental information, NWP described how the density correction factors were determined and clarified that they were meant to be applied to the allowable limits. NWP indicated that although the calculation is complex, in reality users used software to easily calculate the correction factors for the allowable limits.

Next, the observations made in the shielding section were discussed. Staff clarified the observations by describing more specifically what should be provided. When asked to justify certain non-conservative assumptions, such as justifying the location of the analytical source within the package, the applicant stated that the 10% administrative margin was developed for this reason, and staff requested that they justify the amount of movement it is accounting for. The applicant said they'd provide an analysis on justifying that using Zirconium – 40 would not have any effect on neutrons, and that the locations of the tallies were selected based on the shortest distance from the source to the detector and that they would provide this information. Staff stated that in that response they should also discuss whether or not streaming paths were considered when determining tally locations. For a distributed source, allowable limits for this package were determined on a per package basis, however in reality the material is divided into three canisters. Staff questioned how the applicant would ensure that the source material would be evenly distributed amongst the canisters. The applicant stated that their basis for meeting NCT dose rate limits was their analysis in conjunction with pre-shipment dose rates. NWP expressed concerns that if allowable limits were determined to prevent extreme configurations, they would be overly conservative and create an unnecessarily larger number of packages would need to be shipped each time. Staff stated that its position is that package evaluation needs to show that the package meets NCT limits and that pre-shipment information is not usually used as a basis for determining compliance with NCT dose rate limits, but the staff would consider any additional information that the applicant can provide, such as loading procedures that prevent extreme loading configurations.

The applicant also asked how the staff would like to receive this information whether as an RSI response or incorporated into the SAR. The staff stated that it does not have any requirements for how the applicant submits the information, but staff suggested if it was in a document separate from the SAR that that document be referenced by the SAR. The applicant stated that having too much information in the SAR can also cause problems and proposed to submit all information as separate documents and discuss exactly which information should be incorporated into the SAR at a later time.

NWP and DOE indicated to staff that they would provide staff with an estimate of when they could provide responses and that addressing these issues is their first priority. Staff indicated that as this is an acceptance review, the response time should not be too lengthy.