General Comments From ORNL Review of Draft NUREG -XXXX (SFTRA)

December 15, 2010

The quality of technical work performed appears to generally be excellent. As such there are no show-stopper comments. However to make the document more effective we feel the following items need to be addressed:

1. Upon reading the entire document, it is apparent that several different authors were involved in the creation of this document. While it is expected that several different authors would be involved, it is not necessary for it to be apparent in the final document. To this end, ORNL believes that this document needs extensive "finishing" work. It is suggested that a highly experienced technical editor be dedicated to the project. The key to success will be the ability and willingness of the document authors to work with the technical editor to create a finished product.

2. Over many years, the nuclear industry has struggled to overcome public perception issues. A primary issue has been the public's perception that those in the nuclear industry have a "trust us" attitude when it comes to safety concerns. It is imperative that this document be free of this perception. To that end, it is recommended efforts be made to show more work, such as examples, in this document. ORNL has indicated many places throughout the document where either more explanation or an example problem or a list of specific assumptions could be provided to help alleviate this concern.

3. Errors and/or lack of clarity relative to details opens the door to questioning of credibility. All work should be reviewed to ensure that the analytical processes are fully explained and that all work and/or explanations are completely free of errors.

4. A more thorough discussion of the purpose of the report should be included early in the document (either Chapter 1 or the public summary (or both)). It appears that in general the concept being employed is "realistic conservatism" in which as realistic as possible assumptions are being made but where there is uncertainty the assumption leans to the conservative side. If this is the case, it should be discussed in the document. If it is not the case, then the approach used should be explained. Additionally, it is noted that there are assumptions identified in the report that are not conservative. They may be sufficiently realistic and the lack of conservatism may not impact overall conclusions. When conclusions are not conservative, they demand an extra degree of justification.

5. The report lacks a clean and concise description of how RADTRAN

determines dose for the various scenarios. For incident free transport, it is sufficiently clear and the manual is available for further explanation. But for the LOS and loss of neutron shield, it is not clear at all. The model described in App. V.3.1 does not seem appropriate for a streaming or gap problem. The description is very cursory with no demonstration of adequacy.

6. It is concerning when a conclusion is presented and it does not appear to be backed by text in the previous sections. ORNL believes the report needs to be written such that key information is provided and models explained such that readers are not compelled/forced to go to literature. Relative to dose issues, this is not done to the extent necessary to gain the confidence of the reader.

7. ORNL believes that the public will be most interested in the impact to the maximally exposed individual. Although mentioned a few times in the document, in general no information is presented to discuss this topic. Please consider adding such material.