Summary of Discussions with SNL, Tel-con 9/4/2002.

1. Aircraft Impact on HI-STORM

a. SNL plans to run the improved or corrected ZAPOTEC computer Code for the same case as the one run with the CTH program to verify that the earlier problem in the ZAPOTEC related to the momentum transfer has been corrected. The run for 140-150 ms is expected to last 4 to 5 days. However, intermediate results will be reviewed for a smaller time interval into the crash sequence to verify the problem with ZAPOTEC was corrected before the longer segment of the sequence is run. If the ZAPOTEC problem is not corrected, SNL will outline an approach in the September 2002 report to address the issues of the friction and the potential for the cask tip-over using the CTH program.

b. SNL plans to complete two additional runs for the CTH computer Code using the impermeable boundary between the cask and concrete pad, thus preventing the damaged parts of the aircraft from penetrating the concrete pad. The additional runs include aircraft impact at two locations vertically on the cask to simulate the friction for sliding, and potential tip-over of the cask.

c. SNL does not plan to change the strength of overpack concrete from 5000 psi used in the CTH model now to the designed strength of 4000 psi. This is because the strength of concrete is not expected to affect the global response of the cask in a significant manner, and the material properties are not available for the lower strength concrete.

d. The PRONTO analyses for the landing gear local penetration effects into the cask are being rerun with the revised cask model including the mass and stiffness of the fuel basket and the fuel. Also, the cask model at the upper vents is modified to maximize the damage to the cask due to the landing gear impacting the cask at the top at (Ex2 , SNL needs to justify the assumption of not modeling a portion of the aircraft mass which may act with the mass of the landing gear. SNL is making this assumption based on the fact that the mass of the aircraft to which the landing gear is attached shatters during the impact and does not contribute to the local penetration effects of the landing gear. This, however, needs to be demonstrated by review and assessment of the connection details of the landing gear to the aircraft.

2. Aircraft Impact on the NAC UMS

For evaluation of the aircraft impact on the transportation rail cask NAC/UMS, SNL will prepare a brief outline of the analyses they plan to perform to address the issue before October, 2002. This evaluation needs to be completed for the report to the Commission in December 2002.

3. ( ) Effects:

For evaluation of the NAC/UMS cask for ( ) due to ( ), SNL plans to perform additional analyses for ( ) larger than the one analyzed now. SNL has verified the CTH ( ) with the ( ) program results. The evaluation for the ( ) must address the potential damage to the cask, and the Ex2

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Portions Ex 2

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consequences of potential radioactive material release to the environment. Considering location for the Specific or generic locations. Ex2

4. **Boeing Contract:**

The Boeing company has not agreed to the contract with SNL for reviewing the aircraft model, despite SNL's repeated attempts to contact the Boeing for action. The NRC staff needs to help SNL in this area.

5. **Expert Panel**

Concept outlined in morning phone call was generally agreed to by NRC staff, but the staff awaits a written proposal for the three group concept. Sandia Guidance Group, full Expert Panel and Experts for Special Topics Group. SNL will provide the writeup by end of this week (9/6/02).

6. **Classification Controls for Sept 30th Report**

SNL is discussing this internally and NRC staff will also check on this topic. More discussion to follow.

7. **Radioactive material considerations**

A. Location
   i. Generic
   ii. Specific
B. Time to start cleanup (less than or greater than 1 month?)
C. Inclose Calculations