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To: "Bernard White" <BHW@nrc.gov>, "Mahendra Shah" <MJS3@nrc.gov>
Date: 1/16/03 5:48PM
Subject: Re-Run of Engine impact analyses

Mahendra and Bernie:

I wanted to e-mail you my response to a question Mahendra had about why we were re-submitting analyses of the jetliner engine impact into the HI-STORM cask. There are two main reasons for this:

1) Our evaluation of the jetliner impacting a field of casks needs to examine the global impact of the jetliner impacting the casks and the local analysis of the hard components of the aircraft impacting the casks. We need to determine which hard components are a problem. Therefore, we need to examine both the engine and the landing gear. I believe in our report we make a strong case for examining the landing gear and engines. Much of our analysis examines the landing gear strut. Our basis for that was the comparison of the engine and landing gear analyses conducted by Kenneth Gwinn. When Bob Kalan was ready to examine the landing gear and the engine impact for the NAC-UMS he found that the loading function Kenneth Gwinn had used was not accurate. Therefore, he developed a new loading function that we think is the best approach. It is based on test results from engine impact tests into concrete panels and scaled up for the mass of the engines we are considering.

2) We want the report to be consistent from the HI-STORM and NAC-UMS analyses. Therefore, the analyses using the engine impact for the HI-STORM are being re-submitted with the correct loading function. We do not expect the engine impacts to be the controlling case. However, we will verify that.

I have only included you two on this distribution list because it seems my e-mail addresses for some of your other staff are not correct. Please forward this to any other NRC staff that you think should see this. If you have any questions please give me a call. I will be in on Friday.

Thanks,
Jeff

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