

From: Jack Guttmann
To: B, Sorenson, Ken
Date: 5/22/02 10:16AM
Subject: Re: FW: Crash

Ken,

Your recommendation sounds good (end of June).

But do not forget. We are not dictating that you perform your calculations on ANSYS/LS-DYNA. We do want the events analyzed on ANSYS... for NRC use in the future. If you believe that your codes are better and more validated, use your codes, but develop similar models on ANSYS... codes and benchmark them with yours -- for NRC future use (and perhaps in parallel).

Thanks,

Jack.

>>> "Sorenson, Ken B" <kbsoren@sandia.gov> 05/22/2002 10:06:40 AM >>>
Jack,

Jeff Smith, our principal structural analyst on Task 1.1, suggests that he include your idea about the Riera approach as part of our deliverable on Task 1.3, due the end of June. Given the up-coming long weekend and previous commitments of Jeff, the end of June looks like the most realistic date to get you some results. Jeff does think it's a good idea. See his response below.

Regards,

Ken

-----Original Message-----

From: Smith, Jeffrey
Sent: Wednesday, May 22, 2002 7:55 AM
To: Sorenson, Ken B
Subject: RE: Crash

-Ken:

I have thought about the Reira method on a cask a little. I think it would be a pretty good exercise. However, I don't believe it could be done by the first week in June. Next week will be a short week and the following week I will be in training on ANSYS in Phoenix the first 3 days. However, after that I think it might be a worth while and relatively quick exercise to put a pressure pulse on the cask and see what happens. I have a model and I have the Reira curves that Lupe ran for us in 6420 on the

The area that Lupe applied the load to was approximately the same as the area of a cask (11ftx20ft....for the)
Although the Reira curve is for a rigid surface and flat. From what we have seen of Greg's calcs the aircraft kind of wraps around the cask. So, although it is not exactly right, I believe it would be an appropriate exercise. I also believe it would be a natural first step for me on the Task 1.3. It might not be possible (most likely NOT possible) to analyze an aircraft hitting a cask on a PC. However, I think it is likely I could do a

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Reira curve approach and hard parts impacting cask on a PC. I think that is the likely approach for Task 1.3. Therefore, after the ANSYS class and before the end of June (when I promised the NRC the approach for Task 1.3) I could try the Reira method and a few hard things hitting the HI-Storm model that the NRC provided. That will help me develop the approach for Task 1.3 and examine how well the Reira method will work for these problems.

I will be in training the rest of the day.

Jeff

-----Original Message-----

From: Sorenson, Ken B
Sent: Tuesday, May 21, 2002 7:57 AM
To: 'Jack Guttmann'
Cc: Smith, Jeffrey
Subject: RE: Crash

Jack,

We'll get you with an answer to your question. We need to check with our analysts.

Ken

-----Original Message-----

From: Jack Guttmann [mailto:JXG@nrc.gov]
Sent: Tuesday, May 21, 2002 6:28 AM
To: kbsoren@sandia.gov
Cc: Mahendra Shah; Mark Delligatti
Subject: Crash

Ken,

Do you recall the F-16 or a fighter jet that SNL crashed into an concrete wall?

I believe that a load time history was developed for that test.

How quickly can you perform a calculation that simulates that load (including some parametric with a few multipliers on that load history to simulate a somewhat larger air force jet) on the HI-STORM cask?

Can you get an answer to us by first week of June? All we need to know is if the MPC fails.

This is not a start work request, only background info.

Thanks,

Jack.