

From: Goutam Bagchi *NBB*
To: Nanette Gilles
Date: Thu, May 10, 2001 5:00 PM
Subject: Assignments: Future Licensing

Nan,

I am responding here to specific items of your assignments as listed below:

1. I asked everyone to look at the table of contents for the '89 paper and the SRM breakdown and tell me if they think we can use the same outline for our paper. Do we need any additional topic areas?

Suggestion - The SRM asks that the staff critically assess the regulatory infrastructure. In the body of the Commission Paper we address this. Risk informed and performance based criteria applicable to new reactor designs were not addressed in the Table of Contents for the 1989 paper. You may want to pick this up. There are some important regulatory infrastructure areas not addressed in the proposed paper: ASME, ASCE and ACI 349 Codes have changed several aspects of acceptance criteria (damping, stress allowables, drift limits, buckling limits, performance requirements, anchorage provisions) in current editions. NRC staff has not devoted efforts necessary to endorse those acceptance criteria that future reactors are going to propose. NRC staff will require considerable technical support to examine the latest provisions and determine the extent to which they should be adopted. These efforts will be needed even for advanced LWRs. For PBMR, material behavior under high temperature needs a thorough review. There may need to be a shift from the deterministic to risk informed and performance based design. In the areas of electric power, control and instrumentation, we may need to reexamine the domain of Class 1E power, new designs of digital control and instrumentation. We may also need to engage standards writing organizations to produce standards that will be needed. These are points of departure from the 1989 paper and they should be covered.

2. I would like you to focus on advanced certified designs. What questions do we need answers to in order to predict the resources and schedule necessary to license an application for one of the advanced certified designs?

Suggestion - On advanced certified designs the industry, encouraged by the NRC's desire to adopt risk informed approach, may want to seek efficient ways to modify standard designs to make them more economical, perhaps through individual applicants seeking exemption from the certified design rule. I believe that the System 80+ structural/seismic design was considered to be over designed and may have lost its competitive edge in foreign countries. The design certification change process or the COL application can be exercised for this purpose. This would mean more NRC staff resources for those reviews. Use of more recent code criteria and more in-depth reviews would to be considered for the infrastructure improvement process.

3. Everyone is supposed to brainstorm and give me a list of questions/ issues for their area by next Wed.'s meeting.

Suggestion - The main issues that I see are related to implementing risk informed and performance based criteria and standards needed for review.

The Proposed Commission Paper

In the proposed paper, on Page 3, for AP1000 in the last sentence before the comma, add the words "and certain unique design aspects".

On Page 1 of Budget Assumptions, in the last sentence the words "staff is confident that it can complete..." and the discussion of reprioritization in the previous sentence are really not consistent. Either the we say what is going to be reprioritized and why it is acceptable, or we should request funding now (there is no better time).

Thank you,

ce/20

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CC: David Terao; Jack Strosnider; Jerry Wilson; Jose Calvo; William Beckner