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From: George Hubbard *NRR*
To: David Diec, Diane Jackson, Glenn Kelly, Goutam Bagchi, John Lehning, Joseph Staudenmeier, Robert Palla, Tanya Eaton *NRR*
Date: 10/5/00 9:37AM
Subject: TWG Conclusions Revised

I have made minor revisions to the previous conclusions regarding EP and the seismic checklist.

We are going to be putting together a concurrence package by the end of the day. So please provide your latest input ASAP. Dave Diec will be the person to provide the input to along with copies to me and Tim. Dave will work with Paula to get the latest input into the report.

Thanks,

George Hubbard
2870

CC: Paula Magnanelli, Timothy Collins

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CONCLUSIONS

Based on input from Goutam I have revised the conclusions relative to EP and the seismic checklist. Also note that the time period for reducing EP is **60 days** now. Provide any comments to Tim Collins or George Hubbard.

EMERGENCY PREPAREDNESS

Off-site EP can be reduced after 60 days of decay time based on the justification that a licensee can demonstrate the following:

1. They meet the industry design commitments (IDCs), the staff design assumptions (SDAs), the seismic checklist, and have a zirconium fire frequency less than 1×10^{-5} per year (PPG).
2. This is based on the discussion in the report that the risk at the PPG is sufficiently low that a small change in risk is acceptable consistent with the guidance in RG 1.174. The report finds that a reduction in off-site EP is a "small change". By passing the seismic checklist, we are concluding that all currently operating CEUS sites would have a frequency of zirconium fire equal to or less than the failure frequencies using the LLNL hazard estimates. For one CEUS plant (Robinson) and the 3 West coast plants (SONGS, Diablo Canyon, and WNP2), they would have to demonstrate a SFP capacity that would reduce the fire frequency to less than or equal to the PPG before it could reduce off-site EP.

SECURITY

We are making no changes from the February report.

INSURANCE

Insurance levels can be reduced when the licensee can demonstrate that sufficient time is available to reasonably implement accident management strategies* that would preclude a zirconium fire after fuel uncover. We believe that 36 hours would be sufficient time; however, this time would have to be established through coordination with stakeholders such as FEMA. We estimate that after 5 years of decay time about 36 hours would be available for taking actions with high burnup fuels. This time could be shorter for low burnup fuels.

Insurance levels could be reduced without a submittal to the NRC if a sufficient time was demonstrated based on an adiabatic heatup calculation demonstrating that a temperature of 800°C would not be exceeded within the available time. If the licensee used other methods of

calculation (e.g. best estimate heat up analysis), the analysis would have to be submitted to the NRC for review and approval before a reduction in insurance levels could be made.

***NOTE:** Accident Management Strategies refer to any actions (planned or unplanned) which could be taken to prevent a zirconium fire. These actions would include all actions up to and including utilization of all available national and/or international resources.