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From: George Hubbard *NRR*
To: David Diec, Diane Jackson, Glenn Kelly, Goutam Bagchi, Joseph Staudenmeier, *NRR*
Robert Palla, Tanya Eaton
Date: 10/4/00 3:06PM
Subject: TWG Conclusions

Please review the attached conclusions and provide your feedback to Tim or myself. We need feedback ASAP.

Thanks,

George Hubbard
2870

CC: Timothy Collins

B/S

CONCLUSIONS

Based on the extensive work to date on the TWG Report the basic conclusions of the report are provided below. The report is being written to support these positions. Please review and see if you agree with these conclusions and your report input supports them. Provide your comments to Tim Collins or George Hubbard. Please note there are two pages.

EMERGENCY PREPAREDNESS

Off-site EP can be reduced after 90 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 CEUS sites would have a frequency of a zirconium fire equal to or less than the frequencies of the LLNL hazard estimates. All but one CEUS site would meet the PPG if it passed the seismic checklist. For that one plant and the 3 West coast plants they would have to demonstrate a SFP capacity that would reduce the fire frequency to less than 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.