

to be placed in a storage location which requires restricted storage based on initial U-235 loading, cooling time, and burnup. The presence of boron in the pool water assumed in the analysis has been shown to offset the worst case reactivity effect of a misplaced fuel assembly for any configuration. This boron requirement is less than the 1600 ppm currently required by the ANO-1 TS. Thus, a five percent subcriticality margin can be easily met for postulated accidents, since any reactivity increase will be much less than the negative worth of the dissolved boron.

For fuel storage applications, water is usually present. An "optimum moderation" accident is not a concern in spent fuel pool storage racks because the rack design prevents the preferential reduction of water density between the cells of a rack (e.g., boiling between cells). An "optimum moderation" accident in the new fuel pit was previously evaluated and the conclusions of that evaluation have not changed as a result of the fuel enrichment.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

*Response:* No.

The proposed changes will define a portion of the current Region 2 as Region 3. The new region will contain Metamic® poison panel inserts and will allow unrestricted storage of fuel assemblies with various enrichments and burnup. To support the proposed change, new criticality analyses have been performed. The analyses resulted in new loading restrictions in Region 1 and Region 2. The presence of boron in the pool water assumed in the analysis is less than the 1600 ppm currently required by the ANO-1 TSs.

Thus, a five percent subcriticality margin can be easily met for postulated accidents, since any reactivity increase will be much less than the negative worth of the dissolved boron.

No new or different types of fuel assembly drop scenarios are created by the proposed change. During the installation of the Metamic® panels, the possible drop of a panel is bounded by the current fuel assembly drop analysis. No new or different fuel assembly misplacement accidents will be created. Administrative controls currently exist to assist in assuring fuel misplacement does not occur.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

*Response:* No.

With the presence of a nominal boron concentration, the SFP storage racks will be designed to assure that fuel assemblies of less than or equal to five weight percent U-235 enrichment when loaded in accordance with the proposed loading restrictions will be maintained within a subcritical array with a five percent subcritical margin (95% probability at the 95% confidence level). This has been verified by criticality analyses.

Credit for soluble boron in the SFP water is permitted under accident conditions. The proposed modification that will allow insertion of Metamic® poison panels does not result in the potential of any new misplacement scenarios. Criticality analyses have been performed to determine the required boron concentration that would ensure the maximum  $K_{eff}$  does not exceed 0.95. The ANO-1 TS for the minimum SFP boron concentration is greater than that required to ensure  $K_{eff}$  does not exceed 0.95. Therefore, the margin of safety currently defined by taking credit for soluble boron will be maintained.

The structural analysis of the spent fuel racks, along with the evaluation of the SFP structure, showed that the integrity of these structures will be maintained with the addition of the poison inserts. The structural requirements were shown to be satisfied, so the safety margins were maintained.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

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*Entergy Operations, Inc., System Energy Resources, Inc., South Mississippi Electric Power Association, and Entergy Mississippi, Inc., Docket No. 50-416, Grand Gulf Nuclear Station, Unit 1, Claiborne County, Mississippi*

*Date of amendment request:* March 19, 2003.

*Description of amendment request:* The proposed amendment deletes requirements from the technical specifications (TS) and other elements of the licensing bases to maintain a Post Accident Sampling System (PASS). Licensees were generally required to implement PASS upgrades as described in NUREG-0737, "Clarification of TMI [Three Mile Island] Action Plan Requirements," and Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident."

Implementation of these upgrades was an outcome of the lessons learned from the accident that occurred at TMI Unit 2 (TMI-2). Requirements related to PASS were imposed by Order for many facilities and were added to or included in the TS for nuclear power reactors currently licensed to operate. Lessons learned and improvements

implemented over the last 20 years have shown that the information obtained from PASS can be readily obtained through other means or is of little use in the assessment and mitigation of accident conditions.

The changes are based on U.S. Nuclear Regulatory Commission (NRC)-approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-413, "Elimination of Requirements for a Post Accident Sampling System (PASS)." The NRC staff issued a notice of opportunity for comment in the **Federal Register** on December 27, 2001 (66 FR 66949), on possible amendments concerning TSTF-413, including a model safety evaluation and model no significant hazards consideration (NSHC) determination, using the consolidated line item improvement process. The NRC staff subsequently issued a notice of availability of the models for referencing in license amendment applications in the **Federal Register** on March 20, 2002 (67 FR 13027). The licensee affirmed the applicability of the following NSHC determination in its application dated March 19, 2003.

*Basis for proposed no significant hazards consideration determination:* As required by 10 CFR 50.91(a), an analysis of the issue of no significant hazards consideration is presented below:

Criterion 1—The Proposed Change Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated.

The PASS was originally designed to perform many sampling and analysis functions. These functions were designed and intended to be used in post accident situations and were put into place as a result of the TMI-2 accident. The specific intent of the PASS was to provide a system that has the capability to obtain and analyze samples of plant fluids containing potentially high levels of radioactivity, without exceeding plant personnel radiation exposure limits. Analytical results of these samples would be used largely for verification purposes in aiding the plant staff in assessing the extent of core damage and subsequent offsite radiological dose projections. The system was not intended to and does not serve a function for preventing accidents and its elimination would not affect the probability of accidents previously evaluated.

In the 20 years since the TMI-2 accident and the consequential promulgation of post accident sampling requirements, operating experience has demonstrated that a PASS provides little actual benefit to post accident mitigation. Past experience has indicated that there exists in-plant instrumentation and methodologies available in lieu of a PASS for collecting and assimilating information needed to assess core damage following an accident. Furthermore, the implementation of