



MISSISSIPPI POWER & LIGHT COMPANY

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February 25, 1985

NUCLEAR LICENSING & SAFETY DEPARTMENT

U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D. C. 20555

Attention: Mr. Harold R. Denton, Director

Dear Mr. Denton:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416 and 50-417
License No. NPF-29
File: 0260/0272/L-860.0
Ref: 1) AECM-82/237
2) AECM-82/353
Weir Wall Overflow
AECM-85/0046

Mississippi Power & Light (MP&L) previously addressed in References 1 and 2 the issue of weir wall overflow following a postulated inadvertent upper containment pool dump. As indicated to your staff on November 16, 1984, our further review of this matter indicates that our conclusion in Reference 2 to the effect that weir wall overflow has been eliminated was an overstatement if all worst case conditions are combined. The purposes of this letter are to correct our previous statement, to explain the basis for our conclusion that this matter does not involve a significant safety problem and to inform you of our plans for further evaluation and resolution.

Mississippi Power and Light's original response (Reference 1) acknowledged that weir wall overflow could occur if the following conditions existed:

- o upper containment pool and suppression pool both at their maximum level,
- o inadvertent upper pool dump, and
- o negative drywell pressure at the Tech Spec limit.

However, MP&L concluded that this would not create a safety concern for the following reasons:

- o there is insufficient water level from the overflow into the drywell to come into contact with reactor recirculation piping;
- o even if contact were to occur, the maximum possible damage to the reactor coolant (recirculation) piping would be a slight distortion at the weld joints due to thermal stress.

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Thus, failure of the piping to maintain coolant pressure boundary would not occur.

In discussing Reference 1, the NRC expressed concern over the weir wall overflow matter, questioning the original design intent in this regard. In order to resolve this concern, MP&L agreed in Reference 2 to lower the normal drywell vacuum breaker setpoint to 0.15 psid and thereby (it was thought) eliminate the possibility of weir wall overflow following an inadvertent dump. This change was initiated and a Technical Specification change was requested (and subsequently approved on August 31, 1984) to allow changing the vacuum breaker setpoints.

The Containment Issues Review Panel (CIRP) also evaluated this issue and concluded in a draft report submitted to the NRC on August 10, 1983 that drywell flooding was possible since the drywell flooding studies show very little margin against flooding. In the final report submitted on July 27, 1984, it was further concluded that drywell flooding would not lead to a consequential loss-of-coolant accident and is not a safety concern. This conclusion was based on an analysis by General Electric on the effects of weir wall overflow, which had also concluded it was not a safety concern.

During the Technical Specification Review Program the revised drywell vacuum breaker setpoint Technical Specification was reviewed. The reviewer did not pursue the weir wall overflow matter in light of the General Electric analysis showing that no reactor coolant pressure boundary (recirculation piping) failure would occur as a result of the overflow. The reviewer concluded that weir wall overflow was not a safety concern and that further Technical Specification changes were not warranted.

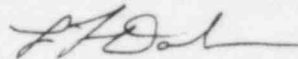
Subsequently, we again reviewed this matter during the preparation of the annual report required by 10 CFR 50.59 and concluded that even with the setpoint changes, contrary to what was stated in Reference 2, worst case vacuum breaker instrument inaccuracy and drift allowances when combined with previously analyzed worst case conditions would still cause weir wall overflow. An additional evaluation was performed which showed that only the two inch reactor water cleanup drain lines will come in contact with water if overflow were to occur. Also, a piping stress analysis was performed including this thermal transient for the drain lines. The results show that the piping stresses and the cumulative fatigue usage factors of affected components are well within code allowables.

The setpoint change that was made reduces the severity of the event should the conservative set of circumstances assumed for the the analysis occur and makes the possibility of weir wall overflow less probable. Based on the GE study of drywell flooding, the conservatism of the analysis that indicated potential for flooding, the design of the suppression pool make up system for single-failure protection against inadvertent dump (discussed in FSAR section 6.2.7.3), the conclusions of the CIRP, and the recent piping stress analysis, MP&L believes this issue has minimal safety significance.

Nonetheless, MP&L will perform a further evaluation of this issue and will advise the NRC of the actions that will be taken to resolve it once the evaluation is complete. The evaluation is currently scheduled to be complete

on May 31, 1985. MP&L will advise you if there are any changes in this schedule. Should you have any questions please advise.

Yours truly,



L. F. Dale
Director

GWS:rw

cc: Mr. J. B. Richard
Mr. R. B. McGehee
Mr. N. S. Reynolds
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