



# MISSISSIPPI POWER & LIGHT COMPANY

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November 27, 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  
Weir Wall Overflow  
AECM-85/0376

The following information is submitted in response to a telephone request by Mr. Les Kintner and Al Notafrancesca on October 21, 1985 and subsequent conversations concerning weir wall overflow.

QUESTION 1 - Is there hot, uninsulated piping in the dry well that would be affected by a weir wall overflow?

RESPONSE - A review of the piping below the predicted water level (EL 101.4' which is 0.65' above the drywell floor) after a weir wall overflow event shows the only hot piping to be four drain lines leading from the recirculation piping. Two of the drains are 2" nominal pipe size and are insulated for their entire length. The remaining two are 3/4" nominal size and are insulated for the first 41" away from the recirculation line. Stress calculations performed on these lines show that they maintain their structural integrity following the overflow. The predicted water level was established by using a conservative approach, (Ref AECM-85/0233 dated October 4, 1985) and is based on: 1) the upper containment pool and suppression pool both being near their maximum level, 2) an inadvertent upper pool dump, 3) and a negative drywell pressure slightly in excess of the vacuum relief set point. A higher level would require all of the above conditions concurrent with multiple vacuum relief failures. The worse case assumption was also made that the drywell is absolutely pressure tight below the vacuum breaker set point. In a recent pressure test of the drywell at 3 psid, a leak rate of approximately 2600 SCFM was recorded.

QUESTION 2 - What is the elevation of the recirculation piping relative to the predicted water level after a weir wall overflow?

RESPONSE - The center line elevation of the recirculation suction piping is 103' 5 1/4" in the cold condition and 103' 3 1/4" when hot. The pipe is 24" nominal diameter and is covered by a metallic nonwicking insulation and removable blanket insulation encapsulated with aluminized cloth/wire mesh where required for inservice inspection and/or interferences.

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QUESTION 3 - Has a report on fatigue analysis of piping in the drywell after subjection to a weir wall overflow been written? Is it generic?

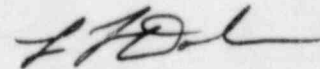
RESPONSE - A generic report performed by General Electric for the Containment Issues Owners Group concerning fatigue analysis of recirculation piping after a weir wall overflow is attached. Note that this report considered total immersion of pumps, motors and piping.

QUESTION 4 - General Electric strongly suggests a shutdown and inspection after a weir wall overflow event. What procedures address this action for Grand Gulf?

RESPONSE - In light of the extremely low probability of this event, no specific procedure exists which directly addresses a weir wall overflow. However, Technical Specifications require the plant to be placed in a hot shutdown condition within 12 hours and in cold shutdown within the following 24 hours if suppression pool level exceeds the range of 18' 4½" to 18' 9 3/4" and is not restored within 1 hour. An inadvertent upper pool dump will cause the suppression pool to exceed its upper limit by almost 5 feet. Technical Specifications also require a plant shutdown as stated above if unidentified leakage exceeds 5 gpm, total leakage exceeds 30 gpm or there is an increase of 2 gpm in unidentified leakage within any 4 hour period. Any significant weir wall overflow would exceed at least one if not all of these Technical Specifications. For the case which was previously discussed the result would be thousands of gallons of water on the drywell floor. In addition to a required plant shutdown, the 2 gpm increase in unidentified leakage in a 4 hour period requires that the source of the increase be verified not to be service sensitive type 304 or 316 austenitic stainless steel. The only way to verify this requirement is to make a drywell entry and inspect the components in the overflow area.

The Technical Specification requirements are tracked by procedure 02-S-01-17, Control of Limiting Conditions for Operation. Documentation of the above required actions in accordance with this procedure would be required prior to a plant restart.

Yours truly,



L. F. Dale  
Director

TWS/SHH:bms  
Attachment

cc: (See Next Page)

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