



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

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May 31, 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: 0260/0272/0756
Quarterly Status Report
March, 1985, "Degraded
Core Accident Hydrogen
Control Program"
AECM-85/0173

The Grand Gulf Nuclear Station (GGNS), Unit 1 Facility Operating License (License No. NPF-29) requires that Mississippi Power & Light (MP&L) submit to the NRC quarterly reports on the status of the "Degraded Core Accident Hydrogen Control Program." In response to that requirement MP&L is submitting the attached report covering the period from January 1, 1985 through March 31, 1985.

Should you have any questions concerning this report, please contact us.

Yours truly,

for
L. F. Dale
Director

MJM/GWS/SHH:bje
Attachment

cc: (see next page)

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cc: Mr. J. B. Richard (w/a)
Mr. O. D. Kingsley, Jr. (w/a)
Mr. R. B. McGehee (w/a)
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Quarterly Status Report for
Quarter Ending March 31, 1985

"Degraded Core Accident
Hydrogen Control Program"

Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416 and 50-417

Mississippi Power & Light Company

Quarterly Status Report - March 31, 1985

"Degraded Core Accident Hydrogen Control Program"

1.0 Introduction

This quarterly status report is submitted to comply with a requirement in the Grand Gulf Nuclear Station, Unit 1 Facility Operating License (License No. NPF-29). This requirement specifies that Mississippi Power & Light (MP&L) should provide quarterly reports outlining the status of the on-going research program to address degraded core hydrogen control requirements. This report covers the first calendar quarter of 1985 ending March 31, 1985.

This report includes brief summaries of the submittals made by MP&L during this quarter along with summaries of meetings between the NRC staff and MP&L. MP&L is participating in the Hydrogen Control Owners Group (HCOG) which is conducting generic research and completing generic analyses to resolve the degraded core hydrogen control issue. Since the work completed by HCOG complements MP&L's program to resolve this issue, this report also includes summaries of meetings between the HCOG and the NRC. The summaries of these meetings included in this report do not reflect a formal HCOG position with respect to any issue and represent only the MP&L interpretation of the meetings.

2.0 Summary of MP&L Submittals

MP&L made no submittals to the NRC on the Degraded Core Accident Hydrogen Control Program during the first calendar quarter of 1985 ending March 31, 1985.

3.0 HCOG and NRC meeting on January 23, 1985

The HCOG met with the NRC on the morning of January 23, 1985, to discuss philosophy in the development of the HCOG Hydrogen Control Program Plan. The afternoon was spent reviewing the HCOG Program Plan Tasks 1 and 7. These two tasks provide direction and acceptance criteria for establishing the most probable hydrogen generation event and the generation of hydrogen release histories.

HCOG and NRC meeting on January 30, 1985

The HCOG met with the NRC on January 30, 1985, to resolve technical issues on the HCOG Program Plan Tasks 1 and 7. This was a technical meeting necessary to resolve open issues on the hydrogen release histories. Most of the discussion centered on the use of the BWR Core Heatup Code and its input parameters which dictate the magnitude of the peak and total hydrogen generated during a degraded core accident.

HCOG and NRC meeting on January 31 and February 1, 1985

The HCOG met with the NRC on January 31 and February 1, 1985 to review HCOG Program Plan Tasks 9, 11 and 12. These tasks pertain to the quarter scale test program, equipment survivability analysis program and the validation of analytical methods.

HCOG and NRC meeting on February 6, 1985

The HCOG met with the NRC on February 6, 1985, to review HCOG Program Plan Tasks 5, 8 and 10. These tasks pertain to the selection of a containment response analysis code, the analysis of containment response and the evaluation of drywell response to degraded core accidents.

HCOG and NRC meeting on February 12, 1985

The HCOG met with the NRC on February 12, 1985, to review HCOG Program Plan Tasks 2, 3, 4, 6, 13 and 14. Tasks 2 and 4 involved the selection of a mitigation system for hydrogen control and the ultimate capacity analysis for the containment and were believed closed based on work previously completed by HCOG. Task 3 pertains to the design of the Hydrogen Ignition System and Task 6 involves research on and analysis of present and planned hydrogen combustion tests. Tasks 13 and 14 dictate the plan for development of a combustible gas control emergency procedure guideline and evaluation of Nevada Test Site data.

4.0 Test Program Status

The summaries and status of the HCOG test program as stated here do not reflect the HCOG position with respect to any test program and represent only an MP&L interpretation of these programs.

4.1 1/4 Scale Test Program Status

All major construction tasks are complete. Shakedown testing required for verifying proper operation of facility systems and instrumentation continue through the quarter.

4.1.1 Planned Activities for the 2nd Quarter of 1985

Complete shakedown tests to verify proper operation of facility systems and instrumentation. Complete scoping tests to assess the effects of variations in key parameters.