



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

October 26, 1982

NUCLEAR PRODUCTION 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: Hydrogen Control Owners Group
(HCOG)
BWR-6 Mark III
Report on Hydrogen Control
Accident Scenarios,
Hydrogen Generation Rates
and Equipment Requirements
File No. 004,008,110
Correspondence No. HGN-007

It is our understanding as a result of conversation with members of the Nuclear Regulatory Staff that Hydrogen Control Owners Group (HCOG) correspondence number HGN-006 dated September 9, 1982 may have been inadvertently submitted without the appropriate attachment. Therefore, this report is being re-submitted by the HCOG as an attachment to this letter.

We regret this oversight and any inconvenience that it may have caused.

Yours truly,

Sam H. Hobbs
by permission of

J. D. Richardson, Chairman
Hydrogen Control Owners Group

JOF/SHH/JDR:sap
Attachments

cc: (See Next Page)

8211010202 821026
PDR TOPRP EMVGENE
C PDR

YGO1

MISSISSIPPI POWER & LIGHT COMPANY

cc: Cart R. Stahle
Hydrogen Control Project Manager
U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D. C. 20555

Walter R. Butler
Containment Systems Branch
U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D. C. 20555

Charles G. Tinkler
Containment Systems Branch
Office of Nuclear Reactor Regulation
Washington, D. C. 20555

John Cummins, Project Manager
Hydrogen Studies, Division 4441
Sandria National Laboratory
Albuquerque, New Mexico 87185

Clifford Anderson
Task Manager for USI-A48
Generic Issues Branch
Office of Nuclear Reactor Regulation
Washington, D. C. 20555

Samuel J. Chilk, Secretary
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

NUCLEAR PRODUCTION DEPARTMENT

September 9, 1982

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

Attention: Mr. Harold R. Denton, Director

Dear Mr. Denton:

SUBJECT: Hydrogen Control Owners Group
(HCOG)
BWR-6 Mark III
Report on Hydrogen Control
Accident Scenarios, Hydrogen
Generation Rates and Equipment
Requirements
File No.: 004, 008, 110
Correspondence No.: HGN-006

On behalf of the Mark III Hydrogen Control Owners Group (HCOG), I am submitting five copies of the enclosed document titled "Report on Hydrogen Control Accident Scenarios, Hydrogen Generation Rates and Equipment Requirements." A list of sponsors of this work is included in the report. The document is not submitted on any specific docket but HCOG members may endorse this study as applicable to their docket.

This report was previously submitted by the HCOG on April 8, 1982 (HGN-003). This final report includes the addition of the discussion on ATWS and reflood of the lower plenum. These sections have been identified as "Rev. 1" to distinguish the additions to the report that was transmitted in April.

The report contains the results of probabilistic studies conducted to establish scenarios most likely to produce large scale releases of hydrogen. The report also contains postulated hydrogen release rates based on boiling water reactor accident analysis computer codes. Finally, the report contains recommendations on equipment which should be capable of surviving accidents which lead to significant hydrogen generation events.

Dupe 16
8009140118

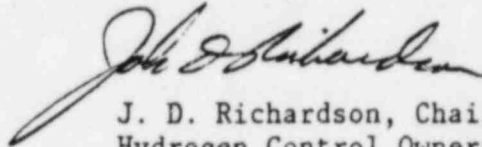
HCG1

Member Middle South Utilities System

MISSISSIPPI POWER & LIGHT COMPANY

The report should assist the NRC in defining credible design bases for accidents involving large scale hydrogen releases from a boiling water reactor in a Mark III containment. The report concludes that for a BWR6, the maximum credible zirconium-water reaction corresponds to approximately 12.5% of the cladding.

Yours truly,



J. D. Richardson, Chairman
Hydrogen Control Owners Group

RMS/SHH/JDR:lm
Attachments

cc: Carl R. Stahle
Hydrogen Control Project Manager
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

Walter R. Butler
Containment Systems Branch
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

✓ Charles G. Tinkler
Containment Systems Branch
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

✓ John Cummins, Project Manager
Hydrogen Studies, Division 4441
Sandia National Laboratory
Albuquerque, New Mexico 87185

Clifford Anderson
Task Manager for USI-A48
Generic Issues Branch
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

Samuel J. Chilk, Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555