

UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 WASHINGTON, D. C. 20555



June 12, 1984

Docket No. 50-416/417

MEMORANDUM FOR: Richard C. Lewis, Director
 Division of Reactor Projects
 Region II

FROM: Robert L. Baer, Chief
 Engineering and Generic
 Communications Branch
 Division of Emergency Preparedness
 and Engineering Response
 Office of Inspection and Enforcement

SUBJECT: POTENTIALLY GENERIC PROBLEM AT GRAND GULF REGARDING THE
 SEISMIC QUALIFICATION OF THE CONTAINMENT AND DRYWELL
 PERSONNEL AIR LOCK(S)

Your memorandum of April 23, 1984 to Edward L. Jordan forwarded the subject potential generic issue for consideration. It was based on information contained in a Part 21 report submitted by Mississippi Power and Light Company on April 20, 1984.

Conversations with Mr. R. A. Maffei of the W. J. Woolley Company, the vendor of the air locks, indicated that Grand Gulf was the last site to upgrade their air lock air system to seismic qualifications. The other sites which had installed the modified system are Catawba, McGuire, Midland, Perry, River Bend, and South Texas.

Based on the above, we plan no further action on this issue.

Robert L. Baer
 Robert L. Baer, Chief
 Engineering and Generic
 Communications Branch
 Division of Emergency Preparedness
 and Engineering Response, IE

cc: see page 2

CONTACT: R. J. Kiessel, IE
 49-28119

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MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

October 3, 1984 OCT 5 P 1: 26

NUCLEAR LICENSING & SAFETY DEPARTMENT

U.S. Nuclear Regulatory Commission
 Region II
 101 Marietta St., N.W., Suite 2900
 Atlanta, Georgia 30323

Attention: Mr. J. P. O'Reilly, Regional Administrator

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
 Units 1 and 2
 Docket Nos. 50-416 and 50-417
 License No. NPF-13
 File: 0260/15525/15526
 PRD-84/08, Containment and Drywell
 Personnel Air Lock Seismic
 Qualification
 AECM-84/0456

References: (1) AECM-84/0237, 4/20/84
 (2) AECM-84/2-0010, 6/8/84
 (3) AECM-84/0337, 6/21/84
 (4) June 12, 1984, Letter from R. L. Baer to R. C. Lewis

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Mississippi Power & Light Company (MP&L) provided a final report for Grand Gulf Nuclear Station (GGNS) Units 1 and 2 for a Reportable Deficiency identified as PRD-84/08 in Reference (3). The deficiency concerned a failure of the vendor, W. J. Woolley Co., to seismically qualify the personnel air locks pneumatic supply system. As stated in Reference (3) the air lock and its associated components were specified to be seismically qualified by the supplier per GGNS Specification 9645-C-153.0. However, contrary to the specification, it was determined that the personnel air locks pneumatic supply system (tubing, supports, and instrumentation) between the check valve upstream of the accumulators and the seals had not been qualified.

MP&L recently received a copy of the NRC internal correspondence of Reference (4). It concerned the potentially generic problem at Grand Gulf regarding the seismic qualification of the containment and drywell personnel air locks. The NRC internal correspondence indicated per conversations with W. J. Woolley Company personnel that Grand Gulf was the last site to upgrade their air lock air system to seismic qualifications.

After receiving the NRC internal correspondence, MP&L requested the GGNS Architect-Engineer (A/E) to investigate the reason why the deficiency concerning the seismic design of the airlock air system had not been handled consistent with other nuclear plants. As a result of this investigation, it appears that there has been a misunderstanding based on the communications between the NRC and W. J. Woolley concerning the GGNS Part 21 report (Reference 3) and the "upgrade" of the air lock air system referred to in the

MISSISSIPPI POWER & LIGHT COMPANY

The "upgrade" Woolley refers to was presented to our A/E in 1978, not to meet seismic requirements but as a "new design" which simplified the previous design and incorporated the requirements of ANSI-N-271-1976 "Containment Isolation Provisions for Fluid Systems," which was not required for Grand Gulf. Our A/E rejected the proposal and chose to retain the issued contract and specification (9645-C-153.0) requirements which has always specified seismically qualified air locks.

Conversations between our A/E and Mr. R. A. Maffei (now with Danley Manufacturing Co.) concerning his discussion with the NRC resulted in some confusion on Mr. Maffei's part as to how this "upgrade" was presented to the various projects and the reason for it. Mr. Maffei indicated that his recounting of the situation was somewhat hampered by his lack of access to past Woolley records.

MP&L and our A/E feel that the NRC should consider a reevaluation of the Part 21 report submitted by MP&L for potential generic effects on other plants. Installation of the modified system does not insure that the air lock systems installed at other plants were seismically qualified. The deficiency reported by MP&L was caused by the failure of the vendor to supply seismically qualified equipment as specified, not by our A/E's rejection of the "upgraded" or "modified" system.

This letter also serves to document a September 20, 1984 telephone conversation between S. H. Hobbs and E. B. Shingleton of MP&L and Mr. R. E. Carroll of the NRC.

Yours truly,



L. F. Dale
Director

EBS/SHH:rg

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

Mr. Richard C. DeYoung, Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

PDR

NOV 28 1984

Enerfab
ATTN: Mr. E. Roundtree
4955 Spring Grove Avenue
Cincinnati, Ohio 45232

Gentlemen:

Mississippi Power and Light Company's (MP&L) letter of April 20, 1984 (Enclosure 1), reported a problem with the seismic qualification of pneumatic supply system to the containment personnel air lock seals at their Grand Gulf Nuclear Station Unit 1.

Since similar systems are to be used at other nuclear power sites, the Office of Inspection and Enforcement was asked to look into the potential for this being a generic issue at other facilities. For this reason, on June 11, 1984, Mr. Richard J. Kiessel, of my staff, spoke with Mr. R. A. Maffei, then an employee of W. J. Woolley Company. Based on his assurances that the upgraded systems sold to the other facilities were seismically qualified, I concluded that there was no need for further action with respect to the generic aspects of this issue (Enclosure 2).

Subsequent to receiving a copy of my internal memorandum addressing my conclusions, MP&L attempted to determine why their pneumatic supply system was not handled in a manner consistent with the other facilities. Their letter of October 3, 1984 (Enclosure 3) states their belief that there had been a misunderstanding between Messrs. Kiessel and Maffei as to the nature of the "upgrade" which had been provided to the other facilities. Thus, they concluded that the systems installed at the other facilities may not be seismically qualified. In addition, they recommended that I should reconsider my decision with respect to the generic nature of this issue.

During your November 14th conversation with Mr. Kiessel, you stated that the upgraded systems provided to the other facilities were, in fact, seismically qualified. You also indicated that you would provide written confirmation of this, if so requested in writing.

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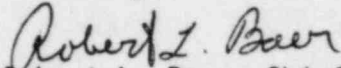
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Since the public record on this issue contains written concerns raised by MP&L, I feel that it is appropriate to base our final action on this issue on a similar level of documentation. Therefore, I am accepting your offer to provide such written verification that the systems provided to the other nuclear facilities were seismically qualified.

Sincerely,



Robert L. Baer, Chief
Engineering and Generic Communications Branch
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

Enclosures:

- 1) MP&L letter to NRC Region II dated April 20, 1984
- 2) My memorandum to Richard C. Lewis dated June 12 1984
- 3) MP&L letter to NRC Region II dated October 3, 1984



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1840, JACKSON, MISSISSIPPI 39205

JAMES P. MCGAUGHY, JR.
VICE PRESIDENT

April 20, 1984

U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N.W.
Suite 2900
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Regional Administrator

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket No. 50-416/417
License No. NPF-13
File 0260/15525/15526/15694.4
FRD-84/08, Final Report for Unit
1, Interim Report for Unit 2,
Containment Personnel Air Lock
Seismic Qualification
AECN-84/0237

On April 16, 1984, Mississippi Power & Light Company notified Mr. R. Carroll, of your office, of a Reportable Deficiency at the Grand Gulf Nuclear Station (GGNS). The deficiency concerns a failure of the vendor, W. J. Woolley Co., to seismically qualify the containment pneumatic supply system.

MP&L has evaluated this deficiency and has determined that it is reportable under the provisions of 10CFR21 for Unit 1. Reportability for Unit 2 is indeterminate at this time. Attached is the Unit 1 Final Report and Unit 2 Interim Report. An update is expected for Unit 2 by October 12, 1984.

Yours truly,

RDC

RDC:dr

ATTACHMENT

cc: See page 2

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S PDR

Mr. J. P. O'Reilly
NRC

AECM-84/0237
Page 2

cc: Mr. J. B. Richard
Mr. R. B. McGehee
Mr. T. B. Conner

Mr. Richard C. DeYoung, Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. G. B. Taylor
South Miss. Electric Power Association
P. O. Box 1589
Hattiesburg, MS 39401

FINAL REPORT FOR UNIT 1 FOR PRD-84/08
INTERIM REPORT FOR UNIT 2

1. Name and address of the individual ... informing the commission:

J. P. McGaughey, Jr.
Vice-President, Nuclear
P.O. Box 1640
Jackson, Mississippi 39205

2. Identification of the facility ... which ... contains a deficiency:

Grand Gulf Nuclear Station (GGNS) Unit 1
Port Gibson, Mississippi 39150

3. Identification of the firm ... supplying the basic component which ... contains a deficiency:

The personnel air locks were fabricated by the W. J. Woolley Company, Oakbrook, Illinois, and supplied to Grand Gulf by Bechtel Power Corporation, Gaithersburg, Maryland.

4. Nature of the deficiency ... and the safety hazard which ... could be created by such a deficiency ...:

A. Description of the Deficiency

The containment personnel air locks consist of a cylindrical steel shell with steel bulkheads at each end, with one steel door in each bulkhead. Sealing of the doors is accomplished by two continuous inflatable seals which surround each door edge. When the door is closed, the air lock pneumatic supply system provides air to the seals, two seals on each door are inflated outwardly from the door. The seals impinge against a smooth stainless sealing surface.

The air lock and its associated components were to be seismically qualified by the supplier per GGNS Purchase Specification 9645-C-153.0. However, it has been determined that the personnel air locks pneumatic supply system (tubing, supports, and instrumentation) between the check valve upstream of the accumulators and the seals had not been seismically qualified.

B. Analysis of Safety Implications

Failure of any component in the pneumatic supply system between the check valve upstream of the accumulators and the seals, as a result of a seismic event, could result in deflation of the containment air lock seals due to loss of air through the failed component. Deflation of all seals could result in the loss of containment boundary integrity (reference PSAR Chapter 6.2).

5. The date on which the information of such deficiency ... was obtained.

The date on which Mississippi Power & Light determined that a defect existed was April 13, 1984. Bechtel informed MP&L on April 5, 1984, of the unqualified pneumatic air supply system. An evaluation was performed and the deficiency was reported to Mr. R. Carroll, of your office, as a reportable deficiency for Unit 1 on April 16, 1984. The MP&L "Responsible Officer," Mr. J. P. McGaughey, Jr., has been notified.

6. In the case of the basic component ... the number and location of all such components.

GCNS Unit 1 has two containment personnel air locks. We do not have knowledge of the location of defective equipment located other than at GCNS.

7. The corrective action which has been taken ... the name of the individual ... responsible for the action; and the length of time that has been ... taken to complete the action.

A. Corrective Actions Taken

Material Nonconformance Report (MNCR) 00380-84 was generated documenting the nonconformance. The corrective actions were specified in Design Change Package (DCP) 84/4506.

The actions taken related to DCP 84/4506 are:

1. Seismically support the pneumatic system from the inflatable seals to the check valves upstream of the accumulators.
2. Replace existing tubing with heavier wall tubing.
3. Replace unqualified components (valves and instruments) with qualified components.
4. Air test the pneumatic supply system modifications.

B. Responsible Individual

J. P. McGaughey, Jr.
Vice-President, Nuclear
Mississippi Power & Light Co.
Responsible for Unit 1

C. Length of Time to Complete Actions

Corrective actions on DCP 84-4506 were completed on April 16,
1984.

8. Any advice related to the deficiency ... that has been, is being, or will be given to purchasers or licensees:

As the deficiency did not originate with MP&L, we have no advice to offer.



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June 12, 1984

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Division of Reactor Projects
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cc: see page 2

CONTACT: R. J. Kiessel, IE
49-28119



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P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

October 3, 1984 OCT 5 P 1:26

NUCLEAR LICENSING & SAFETY DEPARTMENT

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AECM-84/0456

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Yours truly,



L. F. Dale
Director

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Mr. G. B. Taylor

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