



# MISSISSIPPI POWER & LIGHT COMPANY

*Helping Build Mississippi*

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

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October 7, 1983

JAMES P. MCGAUGHY, JR.  
VICE PRESIDENT

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  
Unit 2  
Docket No. 50-417  
License No. NPF-13  
File 0260/15525/15526  
PRD-81/29, Supplemental Interim  
Report #2, Temp Flex  
Penetration Bellows Assemblies  
AECM-83/2-0006

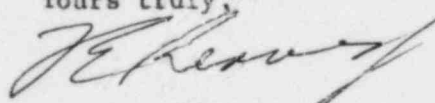
Reference: (1) AECM-81/385, 10/6/81  
(2) AECM-83/2-0003, 3/31/83

On May 29, 1981, Mississippi Power & Light Company notified Mr. V. Brownlee, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GGNS) construction site. The deficiency concerns incorrectly welded spokes on the bellows end sleeves of penetration assemblies manufactured by the Temp Flex Company of Compton, California.

This deficiency was determined to be not reportable and was closed out for Unit 1 and Unit 2 in Inspection Report 50-416/81-50 and 50-417/81-22. However, on March 1, 1983, MP&L informed Mr. R. Butcher, of your office, that the PRD was being re-opened for Unit 2 to assure that the deficiency is adequately addressed.

Based on the results of our investigation MP&L has determined that this deficiency is reportable under the provisions of 10CFR50.55(e) for Unit 2. Details are provided in the attached Interim Report. MP&L expects to submit a Final Report by August 15, 1984.

Yours truly,

  
For J. P. McGaughy, Jr.

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ATTACHMENT

cc: See page 2

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Mr. J. P. O'Reilly  
NRC

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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 158  
Hattiesburg, MS 39401

SUPPLEMENTAL INTERIM REPORT #2 TO PRD-81/29

I. Description of the Deficiency

Penetration bellows assemblies manufactured by Temp Flex have exhibited cracked and broken welds at the junction between the shroud support spokes and the bellows end sleeves. Contrary to Temp Flex design drawing requirements, fillet welds were used instead of full penetration welds.

This deficiency affects the Nuclear Boiler System (B21), Residual Heat Removal System (E12), Reactor Core Isolation Cooling System (E51), Reactor Water Cleanup System (G33) and the Fuel Pool Cooling and Cleanup System (G41). The five bellows assemblies contained in the Standby Liquid Control System (C41) do not have spokes; therefore System C41 is not affected as was reported in letter reference 2.

This deficiency is applicable to Unit 2 only, and does not apply to the NSSS supplier.

Temp Flex calculations state that a 1/8" fillet weld, in lieu of a full penetration weld, is required to support the shroud during a design seismic event. Inspection results of the "as welded" condition indicate that certain spokes have undersized welds, i.e., less than 1/8". Failure of the welds to support the shroud could cause a puncture in the bellows convolution and breach the drywell pressure boundary.

Had the cited condition remained uncorrected, the deficiency could have affected adversely the safety of operations of the power plant at any time throughout the expected life time of the plant. Therefore, this deficiency is reportable under the provisions of 10CFR50.55(e).

II. Approach to Resolution of the Problem

The cause and extent of the deficiency are still under investigation. Corrective and remedial actions will be addressed upon completion of the investigation.

Our Constructor has determined that the deficiency could apply to nineteen (19) of the twenty-four (24) bellows assemblies supplied under Bechtel Specification M-318.0. (Five (5) bellows assemblies in System C41 - Standby Liquid Control System do not have spokes.)

Our Constructor has completed the inspection of fifteen (15) bellows assemblies and all of the nonconformances noted have been identified, dispositioned, repair welded as necessary, and accepted on Nonconformance Report (NCR) 6535.

The inspection of the four (4) remaining bellows assemblies cannot be initiated until the installation is completed. The installation is not scheduled until some time in 1984. NCR 6535 will document and track all nonconforming conditions that are found from a complete inspection of these remaining bellows assemblies. Upon completion of the inspections, the NCR will be dispositioned and processed in accordance with applicable procedures.

III. Status of Proposed Resolution

The cause, extent and corrective actions are scheduled to be resolved by July 1, 1984, based on the results obtained from the investigation described above.

IV. Reason Why a Final Report Will Be Delayed

Due to the limited scope of construction at this time, the investigative actions identified above are scheduled to be completed by July 1, 1984.

V. Date When a Final Report Will Be Submitted

MP&L expects to submit a Final Report, concerning this matter, by August 15, 1984.