Victor Stello

MISSISSIPPI POWER & LIGHT COMPANY
Helping Build Mississippi
P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

NUCLEAR PRODUCTION DEPARTMENT

July 30, 1980

Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N.W.
Suite 3100
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Director

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416/417
File 0260/15525/15526
PRD-80/09, Status Report #2,
Pipe Hanger Nonconformances
AECM-80/174

Reference: AECM-80/82, 4/18/80

On March 19, 1980, Mississippi Power & Light Company notified Mr. F. Cantrell of your office of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station construction site. The deficiency concerns pipe hanger nonconformances.

This matter was identified in an NRC jobsite visit, designated 50-416/80-08. As a result of that visit, an investigative inspection of seventy-seven (77) pipe hanger installations was conducted. This inspection revealed that twenty-three (23) of the hangers inspected exhibited specification nonconformances.

The investigation into this problem has not been completed. Our Constructor has initiated an inspection program to reinspect all previously accepted and accessible pipe hangers. Our evaluation of this deficiency is contingent on completion of this inspection. Additional information pertaining to this deficiency is contained in our response (attached) to the Notice of Violation transmitted by your office as a result of the above mentioned jobsite visit.

We expect to determine reportability and submit a final report by January 15, 1981.

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Yours truly,

for J. P. McGaughy, Jr.
Assistant Vice President,
Nuclear Production

ATR:mt
Attachment

cc: Mr. N. L. Stampley
Mr. R. B. McGehee
Mr. T. B. Conner

Mr. Victor Stello, Director
Division of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

MISSISSIPPI POWER & LIGHT COMPANY
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PRODUCTION DEPARTMENT

June 17, 1980

Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW
Suite 3100
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Director

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
File 0260/0490/15521
RII: WPA 50-416/80-8
Response to NRC Site Inspection 80-08
Reference: MAEC-80/72
AECM-80/104
AECM-80/132

Your Mr. W. P. Ang performed an inspection at the Grand Gulf Nuclear Station construction site on March 3-6, 1980. Your letter of April 1, 1980, transmitting the inspection results included a Notice of Violation for failure to follow pipe support installation and inspection procedures.

MP&L responded to the Notice of Violation on AECM-80/104, dated May 19, 1980. However, we wish to revise our response and provide a more detailed and updated status of the concerns. The attached report will identify each specific concern, as noted in the Notice of Violation, with an up-to-date status of corrective steps taken and results achieved. Corrective steps taken to avoid further noncompliance and date to achieve full compliance are identified on pages 5 and 6 of the report.

Yours truly,

RE Reaves Jr

for J. P. McGaughy, Jr.
Assistant Vice President,
Nuclear Production

RCF:mt
Attachment

cc: Mr. N. L. Stampley
Mr. R. B. McGehee
Mr. T. B. Conner

Mr. Victor Stello, Director
Division of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

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Report of Actions Taken for Violation 50-416/80-08-01

Based on the NRC site inspection of March 3-6, 1980, the following is our response to the Notice of Violation as identified in Appendix "A" in Inspection Report No. 50-416-80-08-01:

(1) Hanger sketch QIE-22-G001-H02-R1 requires installation of two structural bars, piece 7.

Contrary to the above, QC verified hanger QIE-22-G001-H02-R1 was installed without the structural bars piece 7.

Corrective Steps Taken and Results Achieved

A. Condition Report #2805 was initiated by the Constructor.

B. The cause for this condition to occur appears to be, (1) failure to follow installation instructions and inspection procedures, or (2) problem with the procedures themselves.

C. The Constructor has revised and issued Quality Control Instruction, QCI #0715T, Rev. 0. The QCI defines in paragraph 6.3.1 the inspection of hangers, which states in part: All inspections shall be verified per the hanger detail drawing and a check mark placed by the characteristic being checked. And paragraph 6.3.19 which states: Upon completion of the hanger inspection activities and providing the hanger is acceptable, the assigned QCE shall attach the hanger detail drawing as part of the inspection record to the applicable WP/IR.

D. A training session by the Constructor of all affected Quality Control and Field Engineering personnel was conducted on April 21, 1980 through April 28, 1980, which consisted of:

QCI-0715T - Quality Control Instruction

MS-16 - Mechanical Standard, Criteria for Hanger Installation

C-103.1 - Specification, Installation of Concrete Expansion Anchors

(2) Drawing QIE-21-G01-R14-R1 requires a strut, piece 3, to be installed at a 5 degree up angle from its baseplate to the pipe.

Contrary to the above, strut piece 3 for QC verified restraint QIE-21-G01-R14-R1 was installed at approximately a 5 degree down angle from the baseplate to the pipe.

Corrective Steps Taken and Results Achieved

A. Nonconformance Report #4625 was initiated by the Constructor.

B. Same as 1-B above.

C. QCI 0715T has added as an inspection activity paragraph 6.3.8, which states in part: Visually examine, using measurement comparison, to ascertain that the design offset is in compliance with the drawing/specification.

D. Same as 1-D above.

(3) Drawing QIE-22-G001-R09-R6 provides installation requirements for the restraint

Contrary to the above, a baseplate, piece 9, for QC verified restraint QIE-22-G001-R09-R6 was oriented 90 degrees from the drawing requirements.

Corrective Steps Taken and Results Achieved

A. Nonconformance Report #4626 was initiated by the Constructor.

B. Same as 1-B above.

C. Same as 1-C above.

D. Same as 1-D above.

(4) Restraint QIE-22-G001-R02-R4 had already been QC verified to be satisfactorily installed in accordance with the support drawing.

Contrary to the above, the restraint was found to be disassembled. The QC verification had not been voided. No instruction or authorization for the restraint disassembly was available.

Corrective Steps Taken and Results Achieved

A. Condition Report #3366 was initiated by the Constructor.

B. The cause for this condition to occur appears to be a failure of construction to follow work instructions, which caused unauthorized work to be performed.

C. The Constructor has issued an instruction to supervision on performing unauthorized work. This instruction reemphasizes the fact that if a work instruction/authorization cannot be performed or accomplished due to an interference with previously installed items, the Foreman/Superintendent is to contact the responsible Field Engineer for further direction.

The Field Engineer shall then initiate actions for generating work instructions as required. Quality Control Instruction, QCI-0715T, Revision 1, is in the review and approval cycle and delineates that QC will tract previously accepted hanger disassembly/reassembly status through the use of a log which will be maintained by the mechanical QCE discipline. This will be accomplished when the RFE initiates a Rework WP&IR and submits it to QC for review and identification of hold/inspection points.

Quality Control has implemented the logging system and the procedure is scheduled to be in effect by June 15, 1980.

The restraint had been disassembled in this case, but the QC verification had not been voided because it is not the Constructor's practice to void verification documents. Two pipe struts had been disassembled from the pipe clamp, by an unknown person, by removing the cotter pins and clevis pin from the strut assembly at the pipe clamp. Had the existing program been followed the Field Engineer would have generated a WP&IR which would have been processed through the WP&IR normal flow. This new WP&IR would have only documented the fact of disassembly and reassembly of the struts. Therefore, upon final acceptance of this new WP&IR, it would have been attached to the original WP&IR in the QC vault; however, the original WP&IR would still be valid for other inspections that had been conducted, such as, location and elevation, material length and sizes, clearances, kwik bolt length and torque test, etc.

D. Supervision has been reinstructed that performing unauthorized work will not be tolerated. Field Engineering and Quality Control will monitor for this condition in their assigned areas.

(5) Table 3.2 of Specification 9645-C-103.1 requires 1-inch diameter concrete expansion anchor bolts to be torqued at installation to a minimum of 150 ft-lbs.

Contrary to the above, a 1-inch diameter concrete expansion anchor bolt for QC verified restraint QIE-21-G001-R13-R0 was found to be torqued to less than 130 ft-lbs.

Corrective Steps Taken and Results Achieved

A. It is the Constructor's contention that the relaxation noted of the anchor bolt was due to a creeping phenomenon. However, the relaxation, as noted above, is not a cause for rejection since the wedge had been set and torque testing had previously been verified as noted on the WP&IR. This was confirmed by the fact that the anchor bolt was able to achieve the torque value specified, 150 ft-lbs., without any noticeable slippage when the torque was retested by the QC inspector during the presence of the NRC.

The purpose of the torque test is to verify that the wedge has been set. Once the wedge is set, the anchor will serve its designed function.

Furthermore, a sample investigation of previously accepted hangers with concrete expansion anchor bolts has determined that this condition is an isolated case since no torque values were found below the specified torque.

(6) Paragraph 8.3.2 of Specification 9645-C-103.1 requires that relocated 5/8-inch diameter concrete expansion anchor holes be a minimum of 1-7/8 inches center-to-center from an abandoned hole and that the abandoned hole be grouted.

Contrary to the above, two concrete expansion anchor holes for QC verified restraint QIE-22-G001-R02 were 1-3/4 inches from abandoned bolt holes and the abandoned holes were not grouted.

Corrective Steps Taken and Results Achieved

A. Nonconformance Report #4626 was initiated by QC.

B. Same as 1-B-1 above.

C. Same as 1-C above and the addition of Paragraph 6.5.1.10 in QCI 0715T which states in part: Verify a relocated anchor is a minimum of three (3) bolt diameters center-to-center from an abandoned hole. Prior to the installation, assure abandoned bolt holes located behind a support plate are grouted.

D. Same as 1-D above. As noted in AECM-80/104, the Constructor is conducting a reinspection program of all previously accepted hanger installations. The Constructor, in an effort to determine the conical effect of an abandoned bolt hole and the minimum center-to-center distance required, has requested that the University of Tennessee conduct a study to determine the effect. However, at this time the base plates are not being removed; any abandoned holes exterior to the base plates violating the minimum distance requirement are being documented on nonconformance reports. Based on the results of the study it can be determined whether further action is necessary. If it is determined that further action is required, the base plates installed with expansion anchors that have abandoned holes exterior to the plates will be given special attention, since this is a tell-tale sign of abandoned holes existing behind the plates.

(7) Paragraph 4.1.10 of Specification 9645-C-103.1 requires that the maximum projection of a 1-inch diameter concrete expansion anchor bolt beyond the pace of the nut be one inch.

Contrary to the above, a 1-inch diameter concrete expansion anchor bolt for QC verified restraint QIE-21-G001-R13-R0 protruded 1-1/8 inches beyond the face of the nut.

Corrective Steps Taken and Results Achieved

A. Prior to the NRC visit, the Constructor's QC had verified that this bolt was acceptable on the WP&IR. However, if slippage during the original torque testing occurred, it was not documented on the WP&IR since this was not interpreted to be a requirement at the time.

The specification allows for 1/4-inch slippage during testing; therefore, the maximum extrusion allowed after testing would be 1-1/4 inches. It should be noted that the above condition was noted after torque testing had been completed.

B. The cause of the condition is not known as explained in "A". Therefore, it is considered to be a problem with the procedure.

C. Same as 1-C above and the addition of paragraph 6.5.1.7 which states in part: Verify the embedment length is correct and paragraph 6.5.1.8 which states in part: Verify the thread projection is correct. These verifications are to be completed prior to performance of the torque test.

D. Same as 1-D above.

Corrective Steps Taken to Avoid Further Noncompliance

An inspection program is presently being executed by the Constructor. This inspection will include a reinspection of all previously accepted Unit I and Unit II hanger installations, with the exception of those hangers that are inaccessible for inspection. Inaccessible hangers are hangers that are partially or completely obstructed from inspections and will require the removal or disassembly of material or equipment in order that an inspection may be performed. Inaccessible hangers will not be construed as those merely requiring scaffolding or those difficult to inspect because of their location. The Constructor is to conduct an extensive effort to minimize the total number of inaccessible hangers. The Constructor's Quality Control is to identify all inaccessible hangers and their Project Engineering shall evaluate and determine what further action is necessary such as, installation of additional accessible hangers or removal of material or equipment to provide access for inspection. Analysis may indicate that the hanger is unnecessary and thus no further action will be required.

This inspection program as described in the aforementioned documents will be executed on all future hanger installations and/or inspections for both Unit I and Unit II.

Furthermore, QC shall document all nonconformances that deviate from the specification and drawing requirements, or tolerances.

The Constructor has issued Management Corrective Action Request MCAR #66 which is tracking the above condition. A copy of this MCAR will be available in the Quality Assurance files at the Constructor's field office.

Date to Achieve Full Compliance

On our previous response, letter AECM-80/104, from J. P. McGaughy, Jr., to J. P. O'Reilly, dated May 19, 1980, we had stated that full compliance was achieved on May 1, 1980; however, based on the actions described under corrective steps taken to avoid further noncompliance, the above noted condition is expected to be in full compliance when the inspection results have been completed which is presently scheduled for December, 1980.

The above information is not considered to be proprietary.