



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA ST., N.W., SUITE 3100
 ATLANTA, GEORGIA 30303

Report No. 50-416/80-08

Licensee: Mississippi Power & Light Company
 Jackson, MS

Facility Name: Grand Gulf Nuclear Station

Docket No. 50-416

License No. CPPR-118

Inspection at Grand Gulf Nuclear Station near Port Gibson, Mississippi

Inspectors:	<u><i>W. R. Ang</i></u>	<u>3/26/80</u>
	W. R. Ang	Date Signed
	<u><i>J. D. Wilcox</i></u>	<u>3/26/80</u>
	J. D. Wilcox	Date Signed
Approved by:	<u><i>A. R. Herdt</i></u>	<u>3/31/80</u>
	A. R. Herdt, Section Chief, RCES Branch	Date Signed

SUMMARY

Inspection on March 3-6, 1980

Areas Inspected

This routine, announced inspection involved 48 inspector-hours on site in the areas of pipe support baseplate designs using concrete expansion anchor bolts (IEB 79-02); seismic analysis for as-built safety-related piping systems (IEB 79-14).

Results

Of the two areas inspected, one item of noncompliance was found in both areas (Infraction - Failure to follow pipe support installation and inspection procedures, Paragraphs 5 and 6.

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DETAILS

1. Persons Contacted

Licensee Employees

- *C. K. McCoy, Plant Manager
- *T. E. Reaves, Jr., QA Manager
- *J. W. Yelverton, QA Field Supervisor

Other Organizations

Bechtel Power Corporation

- *D. M. Lake, Field Construction Manager
- *R. L. Scott, Project QA Manager
- *C. F. O'Neil, Resident Engineer
- *M. L. Rayfield, Resident Engineer

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on March 6, 1980 with those persons indicated in Paragraph 1 above. The failure to follow pipe support installation and inspection requirements noncompliance was acknowledged by the licensee.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Pipe Support Baseplate Designs Using Concrete Expansion Anchor Bolts (IEB 79-02)

On August 10, 1979, the licensee responded to IEB 79-02 and provided details on how IEB 79-02 requirements were being met. An inspection was performed to verify compliance with IEB 79-02 requirements and licensee commitments. The following documents provide installation and inspection requirements for concrete expansion anchors:

- a. Specification 9645-C-103.1 Rev. 6 - Technical specification for Design and Installation of Concrete Expansion Anchors

- b. WP/P-C-24 Rev. 0 Change 97 - Installation, Inspection and Documentation for Concrete Expansion Anchors
- c. QC Instruction 9.1-22 Rev. 1 - Concrete Expansion Anchors
- d. WP/P - P-5 Rev. 1 - Construction Work Plan/Procedure - Large Pipe Hanger and Small Pips Hanger

The following QC inspected and accepted pipe supports were randomly selected and inspected for compliance with IEB 79-02 requirements and licensee commitments:

QIE 22 G001 C03 R6
QIE 22 G002 R01 R3
QIE 22 G001 R02 R4
QIE 22 G001 R09 R6
QIE 22 G001 H02 R1
QIE 21 G001 C01 R3
QIE 21 G001 R03 R3
QIE 21 G001 R04 R3
QIE 21 G001 R13 R0
QIE 21 G001 R14 R1

The following items were noted during the inspection:

- a. Paragraph 8.3.2 of specification 9645-C-103.1 requires that relocated 5/8" diameter concrete expansion anchor holes be a minimum of 1-7/8" center to center from an abandoned hole and that the abandoned hole be grouted. Contrary to the above, two concrete expansion anchor holes for support QIE 22 G001 R02 were 1-3/4" from abandoned bolt holes and the abandoned holes were not grouted.
- b. Drawing QIE 22 G001 R09 Rev. 6 provides installation requirements for the support. Contrary to the above, a baseplate, piece 9 for support QIE 22 G001 R09 was oriented 90 degrees from drawing requirements.
- c. 1" diameter concrete expansion anchor bolts for support QIE 21 G001 R13 are required by table 3.2 of specification 9645-C-103.1 to be torqued at installation to a minimum of 150 ft-lbs. Contrary to the above, a concrete expansion anchor bolt was found to be torqued to less than 130 ft-lbs.
- d. Paragraph 4.1.10 of specification No. 9645-C-103.1 requires that the maximum projection of a 1" diameter concrete expansion anchor bolts beyond the face of the nuts be 1". Contrary to the above, a 1" diameter concrete expansion anchor bolt for support QIE 21 G001 R13 protruded 1 1/8" beyond the face of the nut.

The above noted items appear to be in noncompliance with 10 CFR 50 Appendix "B" criterion V and shall be identified as examples for infraction 80-08-01,

"failure to follow hanger installation and inspection requirements". Based on the above noted findings and subsequent discussion with inspectors and engineers, the licensee was informed that concrete expansion anchor installation at Grand Gulf did not fully comply with IEB 79-02 and was requested to review current procedures and verification forms to assure full compliance with IEB 79-02 requirements.

Pending completion of concrete expansion anchor installation and subsequent inspection, IE Bulletin 79-02 shall remain open.

6. Seismic Analysis for As-Built Safety Related Piping Systems (IEB 79-14)

In response to IE Bulletin 79-14, On October 31, 1979, the licensee indicated that safety-related piping system and hanger installation was still in a construction phase. The licensee further indicated that verification of compliance with IEB 79-14 would be accomplished prior to fuel load. However, since the supports listed in paragraph 5 of this report had already been QC inspected and accepted, and since 60 percent of Unit 1 supports are in this category, the supports listed in paragraph 5 of this report were also inspected for compliance with IEB 79-14 requirements and licensee commitments. The following items were noted:

- a. Support QIE 22 G001 R02 had already been QC verified to be satisfactorily installed in accordance with the support drawing. Contrary to the above, the support was found to be disassembled. The QC inspection record had not been voided. No instructions or authorization for the support disassembly was available.
- b. Support QIE 22 G001 H02 had been QC verified to be installed in accordance with the support drawing. Contrary to the above, two structural bars, piece 7, had not been installed.
- c. Support QIE 21 G01 R14 had been QC verified to be installed in accordance with the support drawing. Strut piece, 3, was required by the support drawing to be installed at a 5 degree up angle from the baseplate to the pipe. Contrary to the above, strut, piece 3 was installed at approximately a 5 degree down angle from the baseplate to the pipe.

The above noted conditions appear to be in noncompliance with 10 CFR 50 Appendix "B" Criterion V and shall be identified as additional examples of infraction 80-08-01, failure to follow hanger installation and inspection requirements."

During the inspection it was noted that various Engineering specifications allow deviations from installation drawings but do not require that the as built configuration be reflected on the applicable drawings. This condition would not allow a design engineer to analyze the pipe supports based on as-built configurations. The licensee was informed that site procedures should be reviewed to assure that they comply with IEB 79-14 requirements. Pending completion of piping system and hanger installation, resolution of the above noted items, and subsequent re-inspection, IEB 79-14 shall remain open.