

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION IV

Report No. 50-382/81-05

Docket No. 50-382

Category A2

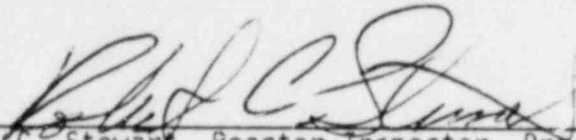
Licensee: Louisiana Power and Light Company
142 Delaronde Street
New Orleans, Louisiana 70174

Facility: Waterford Steam Electric Station, Unit No. 3

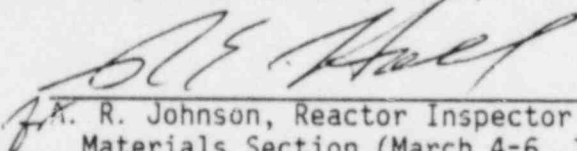
Inspection at: Waterford Steam Electric Station, Unit No. 3

Inspection conducted: February 24-27 and March 2-6, 1981

Inspectors:

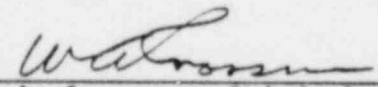

R. C. Stewart, Reactor Inspector, Projects Section No. 3
(Paragraphs 1, 2, 5, and 6)

4/30/81
Date

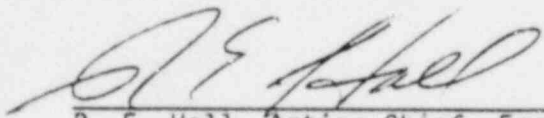

R. R. Johnson, Reactor Inspector Engineering and
Materials Section (March 4-6, 1981, only) (Paragraphs 3 and 4)

4/30/81
Date

Approved:


W. A. Crossman, Chief, Projects Section No. 3

4/30/81
Date


R. E. Hall, Acting Chief, Engineering and Materials
Section

4/30/81
Date

8106220 451

Inspection Summary:

Inspection on February 24-27 and March 2-6, 1981 (Report No. 50-382/81-05)

Areas Inspected: Routine, unannounced inspection of safety-related construction activities pertaining to the installation, inspection and documentation of pneumatic instrumentation tubing and local mounted instrument racks; installation, inspection and documentation of safety-related instrumentation cables; and a follow-up review of previously identified unresolved items and previously identified inspection findings. The inspection involved 78 inspector-hours by two NRC inspectors.

Results: In the areas inspected, one deviation was identified in the area of surveillance inspection (Deviation - failure to continue corrective action commitment - weekly surveillance inspection - paragraph 2) and one deviation was identified in the area of QA/QC records verification (Deviation - failure to verify or evaluate the acceptability of inspection and test results - paragraph 2).

DETAILS

1. Persons Contacted

Principal Licensee Employees

- *A. Gerrets, QA Manager
- *B. Brown, QA Engineer
- *D. Toups, QA Engineer
- *L. Bass, Project QA Manager
- R. Sandridge, QC Engineering Technician
- R. Gautreau, Project Coordinator
- *G. Pittman, QA Engineer
- *R. Bennett, QA Engineer
- J. Woods, QC Engineer (Operations)
- *C. Decareaux, Project Construction Coordinator

Other Personnel

- *E. Ritzmann, Fischbach & Moore
- *R. Hartnett, QA Site Supervisor, Ebasco
- L. Stinson, Site QC Program Manager, Ebasco
- R. Ronquillo, QA Manager, Gulf Engineering (Gulf)
- *L. Richardson, Site QA Supervisor, Tompkins-Beckwith (T-B)
- *G. Sullivan, Project Manager, T-B

The NRC inspectors also interviewed other licensee and contractor personnel including members of the engineering and QA/QC staffs.

*Denotes those attending the exit interview.

2. Licensee Action on Previous Inspection Findings

(Open) Infraction (50-382/80-06): Failure to Follow Contract Procedures Related to Care and Maintenance of Containment Penetration Assemblies. During a previous inspection ^{1/}, the NRC inspector observed that Ebasco Procedure CMI No. 141, "Care and Maintenance Instructions for the Containment Penetration Assemblies," per paragraph D.2 requires that, after being moved to in-place storage, the equipment be provided with adequate protection from damage and deterioration as a result of conditions or activities in the vicinity. In addition, TBP-46, Revision A, "Care and Maintenance of Permanent Plant Items," per paragraph 6.3.1, implements the CMI procedure and requires that surveillances of the installed equipment be performed on a monthly basis.

1/ IE Inspection Report 50-382/80-06, dated April 4, 1980

On March 20, 1980, the NRC inspector noted the following conditions:

- a. Scaffolding for trades working in the area of the installed penetration assemblies was, in several places, installed directly against the assemblies.
- b. Protective covers for the openings of the assemblies were removed and/or were not installed. February 18, 1980, Surveillance Report 730 and Surveillance Report 731 indicated that the openings of the components were covered.
- c. Piping and piping subassemblies were stored inside some of the penetrations, and in some cases, were directly supported by the penetration assembly.

In a written response to the violation, dated May 9, 1980, the licensee stated that Tompkins-Beckwith, Inc., has submitted the following information regarding the above:

- a. Corrective Action Taken and the Results Achieved: Penetrations 55 and 69 have been corrected to comply with the requirements of CMI No. 141. Piping and piping subassemblies have been removed and each penetration vacuumed of debris and the openings sealed for protection.

Scaffolding has been removed from the penetration area.

- b. Corrective Action Taken to Preclude Repetition: QC will increase surveillance inspections to ensure that CMI requirements are being complied with. Inspections will be conducted on a weekly basis and the results documented.
- c. Date When Full Corrective Action Will Be Achieved: Piping and piping subassemblies were removed on April 28, 1980. Debris was removed from subject penetration on April 24, 1980. Scaffolding was removed from the penetration area during the week of April 21, 1980.

QC implemented weekly inspections on April 24, 1980. Inspections are presently in process for all other penetration assemblies to ensure CMI requirements are being maintained. Following these inspections, all penetration openings will have been sealed for protection.

Although this matter had been previously closed ^{2/}, the NRC inspector initiated a follow-up review of the inspection records to ascertain continued compliance with the corrective action commitments. In

2/ IE Inspection Report No. 50-382/80-20, dated September 5, 1980

reviewing the T-B Surveillance Inspection Reports, "In-place Storage Surveillance Reports," Form No. GP-723-67, the NRC inspector observed that weekly surveillance inspections were documented for the period April 4, 1980, through May 31, 1980, with no records to reflect the period June 1, 1980, to the present. In discussing this omission with the cognizant T-B QA supervisor, the NRC inspector was informed that due to a 50% reduction in manpower in May 1980, the weekly surveillance inspections were terminated. It is apparent that T-B has failed to continuously carry out the licensee's commitment stated in their letter to the NRC, dated May 9, 1980.

This is a deviation.

(Open) infraction (50-382/80-20): Failure to Follow Procedural Requirements for the Tension Testing of Installed Expansion Anchors. During a previous inspection ^{3/}, the NRC inspector observed that the T-B Procedure, TBP-33, "Procedure for Inspecting Drilled-In Expansion Type Anchors in Seismic Class 1 Concrete," requires, in Section 6.12(b), that one out of each 100 consecutively installed anchors be tension tested. Contrary to the above, the NRC inspector discovered, during a review of the expansion anchor log (shoots 19 through 41), that those tension tests had not been performed on installed expansion anchors as required since October 1979. Furthermore, several thousand expansion anchors had been installed since October 1979.

In a written response to the violation, dated October 2, 1980, the licensee replied as follows:

- (1) Corrective Action Taken and The Results Achieved - Anchor bolts 2200-2300 listed on the Expansion Anchor Log will be tension tested to satisfy the procedure and contract requirements for failed anchor bolts.

Anchor bolts installed after October 25, 1979, will be tension tested per the procedure and contract requirements. Tests results will be documented and filed in the QA vault.

- (2) Corrective Action Taken to Preclude Repetition - The QC engineer had been reminded of the requirements of Tompkins-Beckwith Procedure TBP-33 and directed by Memo QA-656, dated September 26, 1980, to monitor the Expansion Anchor Log weekly to verify that procedure and contract requirements are being complied with.

3/ IE Inspection Report No. 50-382/80-20, dated September 5, 1980

- (3) Date When Full Corrective Action Will Be Achieved - The 100 bolts (2200-2300) will be tested and documented by November 1, 1980.

Tension tests will be performed on each 100 anchor bolts installed since October 25, 1979, by November 1, 1980. Tests results will be documented and filed in the QA vault.

During this inspection, the NRC inspector conducted a review of the tension test reports, Form GP-723-43, contained in the QA vault and for the period February 27, 1978, through January 28, 1981. During the initial review, the NRC inspector observed that test reports indicated numerous anchors could not be tested due to interferences; for Test Report TT-65, tensions applied were stated in pounds rather than psi as required; and for Test Report TT-62, tension applied was 2420 psi, whereas the maximum should have been 1360 psi. A subsequent review, conducted by the T-B QA supervisor, revealed, of the 115 test reports reviewed, 111 test reports contained unacceptable discrepancies. In discussing this matter with the T-B QA supervisor, the NRC inspector was informed that T-B does not have a procedural requirement that requires inspection/test report results to be verified or evaluated for acceptability at the conclusion of the inspection/test and prior to retention in the QA storage vault.

LP&L's commitment to the NRC Green Book, WASH 1309, dated May 10, 1974, is identified in a letter (LPL-7109), LP&L to the NRC, dated June 23, 1977, and in the LP&L QA Manual, Section 2.0, Table 2-1. The Green Book, "Guidance on Quality Assurance Requirements During the Construction Phase of Nuclear Power Plants," contains the "Supplemental Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems for Construction Phase of Nuclear Power Plants," draft, ANSI N45.2.8. Section 2.0, "General Requirements," Subsection 2.3, "Results," states, in part, "Test reports and data sheets shall include an evaluation of the acceptability of inspection and tests results and provide for identifying the individual who performed the evaluation." The licensee's subcontractor has failed to adhere to this commitment.

This is a deviation.

(Closed) Infraction (50-382/80-09 & 50-382/81-04): Failure to Follow Procedures Relative to the Care of Safety-Related Piping. The T-B area surveillance inspection reports now contain the identity of areas being maintained for storage, including the status of equipment.

This matter is considered closed.

3. Instrumentation - Components and Systems

a. QA/QC Program/Procedures Review

During this inspection, the NRC inspector conducted a follow-on review of the following QA plans, instructions, and procedures to verify conformance to Ebasco Specification LOU-1564.407:

MCP-2140, "Cleaning," Revision 4, May 24, 1979

QCP-3110.4, "Pipe and Tubing Inspection Procedure," Revision 3, February 1, 1979

QCP-3110.5, "Welding Inspection Procedure," Revision 2, January 12, 1979

QCP-3110.6, "Installed Equipment Inspection Procedure," Revision 3, January 11, 1979

SP-651, "Installation of Local Mounted Instrument Racks and Cabinets," Revision 3, October 23, 1978

SP-652, "Installation of Process Pipe Hangers and Supports," Revision 6, April 19, 1979

SP-654, "Tube Tray Hanger Fabrication and Installation," Revision 5, November 17, 1978

SP-656, "Fabrication of Local Instrument Piping and Tubing Assemblies," Revision 3, November 15, 1978

SP-657, "Installation of Impulse Lines," Revision 3, December 6, 1978

SP-658, "Installation of Seismic I Tube Tray for ASME Classes 2 and 3 Tubing," Revision 3, January 15, 1979

no violations or deviations were identified.

b. Operation Control Reports (OCR) - In-Process Work

In addition to the procedural document review, the NRC inspector conducted a review of the QC inspector's OCRs which reflect the inspection activity currently in progress. Six OCRs were reviewed by the NRC inspector:

OCR #1000	Local impulse P-3 w/track and supports
OCR #663	#C-27A and B impulse lines
OCR #999	Local impulse lines
OCR #396	Local impulse lines
OCR #700	Sample line - start-up system 52A2
OCR #701	Sample piping - (spool pieces) ½" 2SL½106-1

Inspection documents contained in the OCR folders included:

QC Process Control Traveler, Form 208-1

Hanger or Supports, Inspection Form 262-1

QC Inspection Report Equipment Installation, Form 277A

QC Material Verification Mechanical Inspection Report,
Form 198.1-1

QC Weld Data Report, Form 197

QC Piping & Tubing Inspection Report, Form 276-1

No violations or deviations were identified.

4. Safety-Related Instrumentation Cable - Review of Quality Records

The NRC inspector reviewed the quality related records relative to 15 installed instrument cables and their respective terminations to ascertain whether these records reflect work accomplishment consistent with established procedures to meet NRC requirements and SAR commitments. Of the 15 cables selected, six were selected from the Reactor Protection System (RPS), six from the Engineered Safety Features System (ESF), and three from the safety-related normal plant process. The installation documentation was reviewed for quality aspects of such work accomplishment as: permissible bend radius, proper grounding and shielding, cable pulling, identification and proper installation of termination components (lugs, connections and splices). No safety-related penetration splices have been implemented to date.

The following documents were reviewed by the NRC inspector:

a. QC Checklists for Cable Pulling (including associated Cable Pull Slips)

QCP-306, 30226D-SMB

QCP-306, 30226K-SMB

QCP-306, 30226G-SMC

QCP-306, 30267E-SMB

QCP-306, 30266H-SMD

QCP-306, 30266F-SMC

QCP-306, 31546C-SA

QCP-306, 31541J-SAB

QCP-306, 31238E-SA

QCP-306, 31237E-SB

QCP-306, 31236S-SB

QCP-306, 31236P-SB

QCP-306, 31231A-PB

QCP-306, 31230A-PA

QCP-306, 31228A-PB

b. QC Checklists for Cable Terminations and Splices (including associated Cable Termination Worksheets)

QCP-307, 30226D-SMB

QCP-307, 30226K-SMB

QCP-307, 30226G-SMC

QCP-307, 30267E-SMB

QCP-307, 30266H-SMD
QCP-307, 30266F-SMC
QCP-307, 31546C-SA
QCP-307, 31541J-SAB
QCP-307, 31238E-SA
QCP-307, 31237E-SB
QCP-307, 31236S-SB
QCP-307, 31236P-SB
QCP-307, 31231A-PB
QCP-307, 31230A-PA
QCP-307, 31228A-PB

c. Construction Procedures - Fischbach and Moore

CP-306, Revision 5, November 26, 1980

CP-307, Revision 5, January 7, 1980

No violations or deviations were identified.

5. Site Tour

The NRC inspectors walked through various construction and storage areas to observe construction activities in progress and to inspect the general state of cleanliness and adherence to housekeeping requirements.

No violations or deviations were identified.

6. Exit Interview

The NRC inspectors met with licensee representatives (denoted in paragraph 1) on March 6, 1981, and summarized the purpose, scope and findings of the inspection.