

APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-498/88-36
50-499/88-36

Operating License: NPF-76
Construction Permit: CPPR-129

Dockets: 50-498
50-499

Licensee: Houston Lighting & Power Company (HL&P)
P.O. Box 1700
Houston, Texas 77001

Facility Name: South Texas Project (STP), Units 1 and 2

Inspection At: STP, Matagorda County, Texas

Inspection Conducted: May 16 through June 17, 1988

Inspectors:

J. Barnes
for

L. D. Gilbert, Reactor Inspector, Materials
and Quality Programs Section, Division of
Reactor Safety

7-5-88
Date

W. M. McNeill

W. M. McNeill, Reactor Inspector, Materials
and Quality Programs Section, Division of
Reactor Safety

7/5/88
Date

Approved:

J. Barnes

I. Barnes, Chief, Materials and Quality
Programs Section, Division of Reactor
Safety

7-5-88
Date

Inspection Summary

Inspection Conducted May 16 through June 17, 1988 (Report 50-498/88-36)

Areas Inspected: No inspection of Unit 1 was conducted.

Inspection Conducted May 16 through June 17, 1988 (Report 50-499/88-36)

Areas Inspected: Routine, unannounced inspection of preservice inspection of components and component supports.

Results: Within the area inspected, one violation was identified (failure to promptly identify nonconformances, paragraph 2.d). Two unresolved items are identified in paragraphs 2.c and 2.d.

DETAILS1. Persons ContactedHL&P

- *J. T. Westermeier, Project Manager
- *J. E. Geiger, General Manager, Nuclear Assurance
- *L. Giles, Operations Manager, Unit 2
- *D. R. Keating, Quality Engineering Manager
- *M. A. McBurnett, Operations Support Licensing Manager
- *R. L. Beverly, PSI/ISI Supervising Engineer
- *J. Haning, Systems Engineering Group, Senior Engineer
- M. Stewart, PSI Coordinator-Supports
- W. Isereau, Operations Quality Assurance Supervisor
- D. Murdock, ISI Coordinator-Piping

Bechtel Engineering Corporation (BEC)

- *R. W. Miller, Project Quality Assurance Manager
- *R. H. Medina, Quality Assurance Supervisor
- F. Almeida, Engineering ABR Group Supervisor

Southwest Research Institute (SwRI)

- R. A. Fougrousse, PSI Project Engineer
- J. C. Younger, Research Engineer

Kemper Group

- B. R. Russell, Authorized Nuclear Inservice Inspector (ANII)

The NRC inspectors also interviewed other contractor personnel during the inspection.

*Indicates the personnel that attended the exit meeting.

2. Preservice Inspectiona. Review of Program (73051)

The NRC inspectors reviewed the licensee's program pertaining to the preservice inspection (PSI). The following documents were reviewed for conformance with the requirements of 10 CFR Part 50.55a(g) and Section XI of the ASME Boiler and Pressure Vessel Code.

- o Interdepartmental Procedure No. 3.04Q, Revision 0, "Preservice and Inservice Inspection Program."

- Operations Engineering Procedure No. 9.04Q, Revision 0, "Personnel Certification Procedure for Visual Examination per ASME B&PV Code, Section XI."
- Unit 2 PSI Weld Examination Plan, ST-HL-AE-2178, dated May 14, 1987, with changes 1 through 14.
- PSI Examination Plan for Component Supports-Unit 2, ST-HL-AE-2514, dated March 9, 1988.
- PSI Examination Plan for Steam Generator Tubes (Unit 2), ST-HL-AE-2020, dated April 13, 1987.
- Mechanized Scan Plan for PSI of Unit 2 RPV, ST-HL-AE-2274, dated June 23, 1987.
- SwRI Plan 84-HLP-STP-1-1-0, Revision 0, Change 5, "Project Plan for the Preservice Examination of South Texas Project Electrical Generating Station, Units 1 and 2."
- SwRI Project 17-1480, "Examination Plan for the Preservice Inspection of Selected Class 1 and Class 2 Components of the South Texas Project Electric Generating Station, Unit 2."
- SwRI Nuclear Quality Assurance Program Manual, Revision 2, Change 13.
- Interdepartmental Procedure No. 3.07Q, Revision 3, "ASME Section XI Repair/Replacement Program."
- Specification No. 5U036JS0002, Revision 0, "Specification for Preservice Inspection of Component Supports of South Texas Project Electric Generating Station-Unit 2."

Records of licensee Quality Assurance (QA) audit and surveillance of PSI activities were reviewed by the NRC inspectors. From this review, the NRC inspectors found that the vendor (Conam) for eddy current testing of steam generators had been audited (Audit Report No. 88-122) and the vendor (SwRI) for PSI of vessels and piping had been subjected to QA surveillance (Surveillance Report No. 87-08). The NRC inspectors also ascertained that component supports PSI for Unit 2, which is performed by the licensee, had not been the subject of audits or surveillances. Licensee personnel informed the NRC inspectors that it was planned to perform such after hot functional testing. The NRC inspectors observed that approximately 75 percent of the component supports had been already inspected and that the post hot functional testing inspection would be limited to

observation for damage. The licensee agreed to review this information and assure itself that PSI of component supports would indeed be the subject of surveillance or audit.

No violations or deviations were identified.

b. Review of Procedures (73052)

The NRC inspectors reviewed the following procedures:

- Mechanized Ultrasonic Inside Surface Examination of Ferritic Vessels Greater Than 2.0 Inches In Thickness, SwRI-NDT-800-120, Revision 0.
- Manual Ultrasonic Examination of Austenitic Thin Wall Piping Welds, SwRI-NDT-800-36, Revision 37.
- Dry Powder Magnetic Particle Examination, SwRI-NDT-300-1, Revision 33.
- Solvent-Removable Liquid Penetrant Color Contrast Examination, SwRI-NDT-200, Revision 69.
- Visual Examination of Nuclear Plant Components, SwRI-NDT-900-7, Revision 11.
- VT-3 Visual Examination of Component Supports, OEP-9.05Q, Revision 1.
- VT-4 Visual Examination of Component Supports, OEP-9.06Q, Revision 1.
- Multifrequency Eddy Current Procedure Westinghouse Series E2 Steam Generator Tubing MIZ-18 Digital Eddy Current System South Texas Project, Conam-42-EC-153, Revision 0.
- Motorized Rotating Probe Procedure for Westinghouse Series E2 Steam Generator Tubing Expansion MIZ-18 Digital Eddy Current System South Texas Project, Conam-42-EC-156, Revision 0.
- Guidelines for Data Analysis of MIZ-18 Data Utilizing DDA-4 Digital Data Analysis System Bobbin Coil Examination South Texas Project, Conam-42-DA-011, Revision 2.
- Guidelines for Data Analysis of MIZ-18 Data Utilizing DDA-4 Digital Data Analysis System Motorized Rotational Probe Exam of Support Plate Expansions South Texas Project, Conam-42-DA-014, Revision 0.

The procedures were reviewed for their conformance to the requirements of ASME Code and the established plans. The ANII log was inspected to verify his review of the procedures.

No violations or deviations were identified.

c. Observation of Work Activities (73053)

The NRC inspectors reviewed the PSI plans to ascertain whether the licensee's PSI program met the Safety Analysis Report for number of items to be inspected, methods of examination, and extent of examination.

The qualifications and certifications of 2 Level I, 21 Level II, and 1 Level III examination personnel were reviewed by the NRC inspectors which included personnel for visual, liquid penetrant, ultrasonic, and eddy current examinations.

The NRC inspectors observed the following examinations that were performed as required by the Unit 2 PSI examination plans for components and component supports.

- ° Liquid penetrant examination of weld Exam 28 on Line 16-SI-2101, a reactor containment sump suction line for the safety injection piping system.
- ° Visual examination, augmented PSI VT-3 and VT-4, of component support SI-2301-SS05 for the safety injection piping system.
- ° Visual examination, augmented PSI VT-3, of component support SI-2306-HL5012 for the safety injection piping system.
- ° Visual examination, PSI VT-3, of component supports SGC1A, SGC2A, SGC3A, and SGC4A for steam generator "A."
- ° Visual examination, PSI and augmented PSI VT-3 and VT-4, of component support CC-2105-HL5004 for the component cooling piping system.

In the areas inspected, the examinations were performed in accordance with the examination procedure by certified Level II examiners.

However, the NRC inspectors determined that the visual examiners were not consistent in interpreting the examination boundary where the support selected for examination was part of a multiple support and the building connection was not shown on the support drawing but reference was made to another support for the connection. The visual examiners were reinstructed to clarify that the examination boundary for performing a VT-3 examination, as stated in Procedure OEP-9.05Q, is from the component to the building structure. The licensee initiated a review of the supports which had been completed to assure

that all supports with this type of design included examination of the building connection. This subject is an unresolved item pending the licensee's review of completed examinations for drawings that reference other support drawings for the building connection (459/8836-01).

No violations or deviations were identified.

d. Review of Records (73055)

(1) Component Supports

The following records for completed examinations on seven component supports were reviewed:

<u>Exam Number</u>	<u>Method</u>
CS-2303-HL5001	VT-3
AF-2012-HL5018	VT-3 and VT-4
CC-2106-RH12	VT-3
CV-2121-HS5008	VT-3
RC-2125-HL5003	VT-3
RH-2204-HL5002	VT-3
SI-2102-HL5016	VT-3

(2) Components

The following records for completed examinations on components were reviewed:

<u>Exam Number</u>	<u>Method</u>
SG-2B-TR12	PT
SG-2B-FW10-IR	UT
6-SI-2108-BB1-3	PT and UT
10-RH-2108-BB1-3A	PT and UT

(3) Mechanized Examinations

The NRC inspectors reviewed the "Eddy Current Examination Houston Lighting & Power Co. South Texas Electrical Generating Station Unit 2 Steam Generators A, B, C, and D April, May, and September 1987." Nonconformance Report (NCR) Nos. AN-03389, 3365, 3366, and 3388 were examined which documented nonconformances identified during the inspection by Conam. It was noted that three tubes were reworked and one tube was plugged as a result of the PSI inspection. The NRC review verified the use of qualified personnel and properly calibrated equipment as well as compliance to the ASME Code and the approved procedures. The eddy current testing records of Steam Generator No. A were reviewed in detail. During the NRC review,

one nonconforming condition (i.e., bulge) was found in the initial inspection by Conam; this nonconforming condition had not been identified on an NCR for Westinghouse evaluation. The licensee initiated an NCR (No. SN-03778) and reviewed the Conam data in detail. The licensee's review found four additional nonconforming tubes (i.e., overexpansions) which had not been previously identified in NCRs. Again the licensee initiated an NCR (No. SN-03780) for these additional tubes. Unit 1 data which was collected by a different vendor is also under review presently. The failure to appropriately document nonconforming conditions is an apparent violation (499/8836-02).

The records of mechanized ultrasonic examination of the reactor vessel were reviewed by the NRC inspectors. Only very minor rework, blending gouges, was performed as a result of the PSI. One intermediate shell longitudinal weld (2-101-124) was reviewed in detail. From the review, the NRC inspectors found that Examination Sheet No. 05001 dated June 24, 1987, referenced a Resolution Record No. 31054 in regard to a reportable indication. This resolution record was not available. There was, however, on the weld's Examination Summary Record Sheet No. 001300 a reference to another resolution record which was in the data and appeared to address the indication in question. SwRI contended that Resolution Record No. 310154 had been voided, replaced by the one which was in the package, and the examination sheet had not been updated to reflect the replacement record. This subject is considered an unresolved item pending SwRI furnishing a basis for which is the correct resolution sheet (499/8836-03).

3. Unresolved Item

Unresolved items are matters about which more information is required in order to ascertain whether or not the items are acceptable, violations, or deviations. The following two unresolved items were discussed in this report:

<u>Paragraph</u>	<u>Item</u>	<u>Subject</u>
2.c	499/8836-01	Review drawings of multiple supports to assure PSI examination completed
2.d	499/8836-03	Missing PSI examination resolution sheet

4. Exit Interview

The NRC inspectors met with the licensee representatives denoted in paragraph 1 on June 17, 1988, and summarized the inspection scope and findings.