

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-498/88-26  
50-499/88-26

Operating License: NPF-71  
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, Units 1 and 2 (STP)

Inspection at: STP, Matagorda County, Texas

Inspection Conducted: April 11-15, 1988

Inspectors: Claude E. Johnson  
C. E. Johnson, Reactor Inspector, Plant Systems  
Section, Division of Reactor Safety

5-10-88  
Date

Amarjit Singh  
A. Singh, Reactor Inspector, Plant Systems Section  
Division of Reactor Safety

5/2/88  
Date

Approved: R. E. Ireland  
R. E. Ireland, Acting Chief, Plant Systems Section  
Division of Reactor Safety

5/10/88  
Date

Inspection Summary

Inspection Conducted April 11-15, 1988 (Report 50-498/88-26)

Areas Inspected: No inspection of Unit 1 was conducted.

Results: Not applicable.

Inspection Conducted April 11-15, 1988 (Report 50-499/88-26)

Areas Inspected: Routine, unannounced inspection including reactor coolant pressure boundary piping, concrete expansion anchors, pipe supports, and restraint systems.

Results: Within the three areas inspected, no violations or deviations were identified. One unresolved item was identified in paragraph 3a.

DETAILS1. Persons ContactedHL&P

- \*J. T. Westermeier, Project Manager
- \*J. S. Phelps, Project Compliance Supervisor
- \*S. D. Phillips, Project Compliance Engineer
- \*G. L. Parkey, Plant Superintendent, Unit 2
- \*D. C. King, Construction Manager, Unit 2
- \*G. Ondriska, Start Up Supervisor
- \*W. Trujillo, Nuclear Assurance Supervisor
- \*M. Duke, Engineering
- \*M. E. Powell, Supervising Engineer, Licensing

Bechtel Power Corporation (Bechtel)

- \*R. Bryan, Field Construction Manager
- \*R. Medina, Quality Assurance Supervisor
- \*R. Miller, Project Quality Assurance Manager

Ebasco Service Inc. (Ebasco)

- \*R. Able, Quality Control Supervisor
- \*M. A. Garcia, Field Engineer

In addition to the above, the NRC inspectors also held discussions with other members of the HL&P, Bechtel, and Ebasco staffs.

\*Denotes those individuals attending the exit interview conducted on April 22, 1988.

2. Reactor Coolant Pressure Boundary Piping

The purpose of this inspection was to determine whether activities relative to reactor coolant pressure boundary piping are being accomplished in accordance with NRC requirements, FSAR commitments, and licensee procedures by direct observation and independent evaluation of work performance, work in progress, completed work, and records review.

a. Work Observation (49053)

The NRC inspectors selected a small portion of 4-inch line that taps into the 31-inch primary coolant loop and continues to the letdown heat exchanger. From the 4-inch line a small portion of 2-inch line was also examined. Both these lines are code class 1. The portion examined was located on Bechtel Drawing No. 4C369PRC457, Sheet 4, Revision 7.

The NRC inspectors used the latest revised drawings and field change requests (FCR) to perform the inspection. Some inspection attributes examined are as follows: orientation/configuration of piping, pipe supports, valves, elbows and field welds (FW); type of material and identification; length of pipe run between components; and overall general cleanliness of pipe and equipment.

One concern was identified on Support No. RC-9321-HS5001. This concern related to whether travel stops should be installed in the spring can supports when the system is empty or drained. The procedures require that travel stops be installed in spring can supports when the system is drained. The NRC inspectors were told that the system was empty. Examination of Support RC-9321-HS5001 indicated that the stops had been removed which appeared to violate procedures. Further investigation by the NRC inspectors and HL&P indicated that the system was full and Start-Up Field Report (SFR) No. 287-0151 indicated that Support RC-9321-HS5001 was in its proper position and documented.

b. Records Review (49055)

The NRC inspectors reviewed N-5 record packages pertaining to the reactor coolant piping systems examined. These packages contained receipt and inspection records, installation records, material test reports, NDE, welding, and certificates of compliance for materials. There were no deficiencies identified. Record packages reviewed are listed as follows:

RC-2320-HL5003	RC-2320-FW0001
RC-2320-FW0004	RC-2321-FW004.1
RC-2320-FW0003	RC-2321-FW0005
RC-2320-FW0002	RC-2321-FW0006
RC-2321-FW0001	

3. Pipe Supports and Restraint Systems (50090)

a. Procedure Review

The NRC inspectors reviewed the licensee's implementing specifications and procedures used in the fabrication, installation, and inspection of pipe supports and restraints. Specifications and procedures were reviewed to determine if they contained adequate technical installation/inspection criteria and technical requirements as referenced in the Final Safety Analysis Report (FSAR). Review of these procedures indicate that the following information is incorporated:

- ° Manufacturers' recommendations and instructions of the installation requirements are incorporated.

- Controls for ensuring the type and classification of pipe supports comply with approved drawings and specifications.
- Provisions for preinstallation and in-process inspections are performed at appropriate times.
- Controls are included to prevent material degradation when welding, cutting, forming, matching, and heat treatment are performed.
- Minimum embedment length for expansion anchors is included.
- Torque requirements for bolting are included.

Procedures and specifications reviewed appear adequate. The only concern identified was in Standard Site Procedure (SSP) 9, paragraph 5.6.6.8(B). During the review of SSP-9, it was noticed that paragraph 5.6.6.8 had been modified by Interim Change Notice (ICN) No. 31. The previous paragraph for liquid filled piping, after hydrotesting, required that all travel stops shall remain installed when the system is to be drained. ICN No. 31 modifies the "shall" to "should" be installed prior to draining.

The concern is that if quality control (QC) or startup failed to install these travel stops prior to draining the system would these supports be damaged and would there be any additional stresses added to the piping system? The NRC inspectors were not satisfied that the change was correct. This item is considered as an unresolved item until more information is available from the licensee to establish whether or not the change was correct. (499/8826-01)

b. Work Observation

The NRC inspectors examined pipe supports and restraints in various systems including several on the 4-inch and 2-inch reactor coolant primary systems. The NRC inspectors examined many inspection attributes in accordance with site procedures and the latest revised installation drawings. Examination of the supports indicate that the installation and inspection program is functioning properly. No apparent weaknesses were evident. The program appears to be well managed. Pipe supports and restraints examined are listed below:

CV-2142-HF5041	CV-2142-HF5039
MS-2001-HL5002	RC-2321-HS5001
CV-2131-HS5002	CV-2001-HL5001
CV-2125-HF5028	MS-2002-HL5002
CV-2142-HF5037	MS-2001-HL5006
RC-2419-HS5001	MS-2001-HL5001
RC-2418-HS5001	MS-2001-HL5003

c. Records Review

The NRC inspectors reviewed records of the pipe supports inspected in paragraph b. Records reviewed were determined to be legible, complete, properly identified, correctly stored, and easily retrievable. The records also adequately document current status of nonconformances and FCR.

No violations or deviations were identified in the records review.

d. Personnel Qualification Review

The NRC inspectors selected six welders and five QC weld inspector's training and qualification records for the period February 25 through November 9, 1987, and November 15, 1985, through October 1, 1987, respectively. The NRC inspectors observed that welder records reflected that all welders were qualified in accordance with licensee Procedure SSP-31, "Welder Qualification," and in accordance with Section IX of ASME Code requirements. In addition, it was found that the licensee maintained a continuous computer data record system which listed the qualification status of all welders. During the review of QC weld inspector records, the NRC inspectors observed that individual inspector's training and certification records were documented in the specific training and certifications received, including ASME and ANSI N.45.2 Code requirements. In addition, each inspector's records indicated specific training in the visual acceptance criteria of SSP-16 for structural welds.

No violations or deviations were identified.

4. Concrete Expansion Anchors (46071)

During the inspection of reactor coolant pressure boundary and pipe supports, concrete expansion anchors were also examined. Review of this program indicated that adequate procedures were in place for use by QC, and manufacturers recommendation/instructions were incorporated into these procedures.

The licensee appeared to have good control on the storage and issuance of concrete expansion anchors. The licensee also included in these procedures adequate control of specific activities such as listed below:

- embedded depth of anchor bolt;
- minimum spacing between bolts;
- minimum edge distance from steel plate edge;
- bolt marking/diameter;
- initial installation torque;
- minimum edge distance for concrete openings; and
- application of torque seal.

The NRC inspectors also examined the concrete expansion anchors in accordance with site procedures and drawings. There were no violations or deviations identified.

5. Exit Interview

The NRC inspectors met with the licensee personnel (denoted in paragraph 1) on April 15, 1988, and summarized the scope and findings of this inspection. No information was identified as proprietary.