

SSER

Task: Allegations \*A-308; A-306j

Ref. No.: 4-84-A-06/186, 184j

Characterization: The allegation is that the piping system documentation of various contractors and LP&L is inadequate and that it cannot be verified that piping systems were installed and inspected in accordance with the ASME Code.

Assessment of Allegation: The implied significance of this allegation is that inadequate documentation reviewed and accepted by Tompkins-Beckwith (T-B), Mercury, EBASCO, and LP&L could render the acceptability of installation and inspection of various piping systems as indeterminant.

The NRC staff reviewed documentation procedures of various sub-contractors, EBASCO, and LP&L to verify that they were in accordance with the ASME Code, 10 CFR 50, and the applicable ANSI N45.2 requirements. The Staff verified implementation of the procedures by reviewing Mercury and T-B turnover packages for technical adequacy and content.

The T-B packages included both large and small bore piping for safety-related systems. The selected startup systems (SUS) sampled included Component Cooling Water, Reactor Coolant, and Safety Injection. Packages withdrawn from the vault were sealed and each package had been reviewed by both T-B and EBASCO's Quality Assurance Installation Records Group (QAIRG). Each review was documented on a checklist noting accept/reject status with the reviewer's signature, initials, and date. LP&L had sampled 10% of the turnover packages, and their review was also documented with accept/reject status.

Included in the T-B documentation packages were the following quality documents/records: Construction Installation Records Review Check Lists signed/dated by QAIRG (1 each for T-B and EBASCO); Traveler Index's; Bill of Material; Weld Control Record(s); Travel Erection Sheet(s); Weld Repair and NCR Index's; Cleanliness Reports (as applicable); Code Data Reports, CMTRs and C of C's; NCRs; Flange Control Documents; NDE Reports; Piping Modification Travelers; Discrepancy Notices; CIWAs; and ISO-Drawings.

The NRC staff observed that T-B and EBASCO maintained adequate, detailed quality records. The accept/reject status was noted by appropriate inspector/reviewers by signature and date.

The NRC staff found that records had been reviewed for accuracy and completeness prior to being filed as historical records, that inspection/test results were documented and traceable to the material, and that records were readily retrievable.

8510010216 840626  
PDR ADOCK 05000382  
E PDR

- 2 -

The NRC staff found that the T-B and EBASCO documentation system was adequate. This portion of the allegation had no safety significance and was not indicative of any adverse generic implications.

The Mercury packages reviewed were for the Reactor Coolant instrument lines. The packages were stored in the Mercury and EBASCO vaults and retrieved by LP&L for review purposes. Each package reviewed had been previously reviewed by Mercury QA and EBASCO QAIRG. The Mercury review was denoted on each document, and overall package acceptance was delineated on the Mercury Documents Requirements Form. EBASCO QAIRG review was documented on the Construction Installation Records Review and Status Check List.

Included in the Mercury packages were the following documents:

- 1) EBASCO Review Check List (dated and signed by Ebasco QAIRG reviewer);
- 2) Mercury Documentation Requirements Form/RPT-Form 209 (Documentation Index);
- 3) Operations Control Report (OCR) cover sheet;
- 4) Process Control Traveler;
- 5) Pipe and Tube Inspection Report
- 6) Material Verification-Heat No's Traceable, CMTRs and C of C;
- 7) Weld Data Sheets;
- 8) NDE Reports;
- 9) Quality Control Reports-acceptance of work;
- 10) MCRs;
- 11) CIWAs;
- 12) As-built/Red-Lined drawings - (latest revisions); and
- 13) Hydrostatic/Pneumatic Test (as applicable); including
  - a) Hydrostatic/Pneumatic Test Instructions,
  - b) Hydrostatic/Pneumatic Data Sheets,
  - c) Valve Line-up Sheets,
  - d) Hydro/Pneumatic Test Discrepancy List,
  - e) Weld Data Sheets (info copy to verify weld no.; not used for B31.1 tests),
  - f) Calibration Sheets, and
  - g) Piping and Instrumentation Drawing (P&ID).

The NRC staff reviewed Mercury's quality records and verified the following:

1. Documentation of Mercury QA and EBASCO QAIRG review.
2. Documentation of Authorized Nuclear Inspector (ANI) review and acceptance of documentation package.
3. That EBASCO QAIRG reviewed 100% of the packages and LP&L reviewed packages on a 10% sampling basis (similar to Mil-Std 105D sampling techniques).
4. That inspection/test results were documented and traceable to installed hardware.
5. That inspection weld records, drawings, and other quality records generically appeared to be complete. However, they were awkward and cumbersome, and it was difficult to follow the traceability of individual records.

6. That record retrievability was not timely.
7. That weld records were not always original documentation (see allegations A-197 to A-206).
8. That system walkdown disclosed that the installation (as-built) matches final drawings. Two N-5 installation Code Data Reports were found to be in nonconformance with the drawings.

The NRC staff concludes that this allegation has neither safety significance nor adverse generic implications. See Allegations A-183, 184, 197 to 206, 223, and 230 for additional information.

[Potential Violations: None.]

Actions Required: None.

#### References

1. ASME Section III - Nuclear Power Plant Components
2. ANSI N45.2 - QA Program Req's for Nuclear Facilities
3. ANSI N45.2.9 - Req's for Collection, Storage, and Maintenance of QA Records for Nuclear Power Plants
4. Tompkins-Beckwith: TBP-20 QA Records Turnover; TBP-35 Prep. and Cont. of Process Piping Travelers
5. Mercury: QCP-301D (N49720-Suppl.) Rev. 4 - Quality Assurance Records Control
6. EBASCO: QAI-9 Rev. 2 - Review and Handling of Construction-Installation Records
7. LP&L: QP17.5, Rev. 0 - Quality Records Status Review
8. Staff Audit Documentation of T-B SUS's 36, 52, and 60 (Large and Small Bore Piping)
9. Staff Audit Documentation of Mercury's Reactor Coolant Instrument Lines
10. EBASCO Interoffice Correspondence (File No. W3-QAIRG-400) dated March 22, 1983, John Tompeck to Distribution, Re: Generic Open Items-N-5 Review.

Statement Prepared By:

V. Wenczel

\_\_\_\_\_  
Date

Reviewed By:

\_\_\_\_\_  
Team Leader\_\_\_\_\_  
Date

Reviewed By:

\_\_\_\_\_  
Site Team Leader(s)\_\_\_\_\_  
Date

Approved By:

\_\_\_\_\_  
Task Management\_\_\_\_\_  
Date