

SSER

Task: Allegations A-188, A-190, A-191, A-193

Reference No.: 4-84-A-06/83, 85, 86, 88

Characterization: The allegations is that Mercury Construction Company's procedures for review of quality assurance (QA) records or documentation packages were vague, loose, had not been properly reviewed by EBASCO and LP&L Engineers, and did not meet the requirements of ANSI Standards or the ASME Code requirements.

Assessment of Allegation: The implied significance of this allegation is that if the Mercury records review procedures were inadequate, the records review of safety-related systems may not have assured the acceptability of the installation of Mercury systems.

The NRC staff investigated the allegation by evaluating (1) Mercury's "Review and Handling of Construction-Installation Records" procedures for compliance with ANSI and ASME requirements; (2) EBASCO's program for reviewing and approving contractor procedures prior to issuance; and (3) task reports regarding the NRC staff review of Mercury's turnover documentation packages for procedural implementation.

Mercury Company Review

The NRC staff compared Mercury's QA record control procedures with the ASME Code, 10 CFR 50, Appendix B, and the applicable ANSI N45.2 requirements and found them acceptable. The procedures provided guidelines and established minimum requirements for the collection, control, review, filing, storage, maintenance, and disposition of quality assurance records. Their "System Turnover Document Package" included test records, drawings, equipment lists, and documentation of records supporting construction activities and the completion of the installation as identified by the system or sub-system. The types of quality records which were to be included in the System Document Turnover Packages were:

1. Documentation requirements index, which identified required quality records and included package review completion and acceptance signatures dated by Mercury and the Authorized Nuclear Inspector (ANI).
2. Equipment Installation Form 277.
3. Expansion Anchor Installation Form 277A.
4. Piping Tubing Inspection Report Form 276-1.
5. Tube Tray Inspection Report Form 262-A-1.
6. Hanger and Support Inspection Form 262-1.

7. Weld Data Reports Forms 197-1, -2 or -3.
8. Material Verification Reports Form 198.1-1 (as applicable).
9. Failed Anchor Reports Form 211A.
10. QC Report (general) Form 211 (as applicable).
11. Process Control Traveler Form 208.
12. Operation Control Report Form 110.
13. Reference to Code Data Reports or Copies of Code Data Records.
14. QC Pressure Test Reports Form 216.
15. Pressure Testing Requirements.
16. NDE Reports.
17. Mercury Drawings.

EBASCO Review

EBASCO's program for procedural review and approval included procedures generated by EBASCO Engineering and all site construction contractors. The Site Quality Assurance Engineering Department and/or other EBASCO disciplines, as required, reviewed procedures affecting quality prior to implementation. Two procedures governed procedural review and approval. Procedure ASP-III, Preparation of Site Procedures, delineated guidelines for preparation, scope of procedures, instructions for procedural content, procedure, approval, issuance, and the revision mechanism. Procedure QAI-2, QA Review of Site Generated Procedures of Activities Affecting Quality, details the methods for procedural review and documenting comments applicable to the review; the resolution and acceptance of procedural comments; and final acceptance of the procedure.

The NRC staff obtained a copy of EBASCO's review/comments and approval for the initial and current revision of Mercury's QA Records Control Procedure QCP-3010. The objective was to verify that EBASCO had reviewed and approved Mercury's procedures prior to implementation. These documents contained recorded comments with accepted resolution, and approval granted to Mercury for issuance and implementation.

The staff also reviewed a number of Mercury turnover QA documentation packages for the Reactor Coolant instrument lines. These packages had been reviewed and approved by Mercury's QA personnel, using the previously identified

documentation review procedure. EBASCO QAIRG also reviewed and approved these packages. Contained in the packages were the following types of quality documents:

- A. EBASCO Review Check List (dated and signed by EBASCO QAIRG reviewer)
- B. Mercury Documentation Requirements Form/RPT-Form 209 (Documentation Index)
- C. Operations Control Report (OCR) cover sheet
- D. Process Control Traveler
- E. Pipe and Tube Inspection Report
- F. Material Verification-Heat Numbers Traceable, CMTRs and C of C.
- G. Weld Data Sheets
- H. NDE Reports
- I. Quality Control Reports-acceptance of work
- J. NCRs
- K. CIWAs
- L. As-Built/Red-Lined Drawings (latest revisions)
- M. Hydrostatic/Pneumatic Test (as applicable)
 - 1. Hydrostatic/Pneumatic Test Instructions
 - 2. Hydrostatic/Pneumatic Data Sheet
 - 3. Valve Line-Up Sheet
 - 4. Hydrostatic/Pneumatic Test Discrepancy List
 - 5. Weld Data Sheet - information copy to verify weld number (not used for B31.1 test)
 - 6. Calibration Sheets
 - 7. Piping and Instrumentation Drawing

For further information concerning the staff's review of Mercury's documentation system, see Allegations A-308, A-183, A-184, A-197.

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Potential Violations: None.

Actions Required: None.

References

1. ASME Code Section III - Nuclear Power Plants Components.
2. ANSI N45.2 - QA Program Requirements for Nuclear Facilities.
3. ANSI N45.2.9 - Requirements for Collection Storage, and Maintenance of QA Records for Nuclear Power Plants.
4. Mercury Procedure QCP-3010 (N49720-Suppl.), Revision 0 and Revision 1, Quality Assurance Records Control.
5. EBASCO Procedure ASP-III, Issue M, Preparation of Site Procedures.
6. EBASCO Procedure QAI-2, QA Review of site generated procedures of Activities affecting quality.
7. Staff Audit Documentation of Mercury's Reactor Coolant Instrument Lines.

Statement Prepared By:

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The NRC staff investigated the allegation by evaluating (1) Mercury's "Review and Handling of Construction-Installation Records" procedures for compliance with ANSI and ASME requirements; (2) EBASCO's program for reviewing and approving contractor procedures prior to issuance; and (3) task reports regarding the NRC staff review of Mercury's turnover documentation packages for procedural implementation.

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In conclusion, Mercury's QA records control procedures for the review of QA turnover documentation packages were found to be acceptable. Their procedures were compared with the appropriate ANSI and ASME requirements and found to be acceptable. EBASCO reviewed and approved Mercury's procedures prior to implementation. The NRC staff concludes that these allegations have neither safety significance nor generic implications.

Potential Violations: None.

Actions Required: None.

References

1. ASME Code Section III - Nuclear Power Plants Components.
2. ANSI N45.2 - QA Program Requirements for Nuclear Facilities.
3. ANSI N45.2.9 - Requirements for Collection Storage, and Maintenance of QA Records for Nuclear Power Plants.
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