

SSER

Task: Allegation A-100, A-101, A-102, A103, A-127, A-128a, A-128c, A-285a

Reference No.: 4-83-A-88; 4-84-A-06/21, 22, 23a&c, 167

Characterization: The allegation is that the Mercury Construction Company had the following material traceability problems: (1) in one case a Mercury QA Supervisor directed clerical personnel to improperly add valid heat numbers to records when missing heat number were discovered, and (2) numerous cases where the original heat numbers were not transferred to the tubing when it was cut.

Assessment of Allegation: The implied significance of this allegation is that the records for material may not accurately reflect what is actually installed in the field, a condition which could affect the acceptability of safety-related systems.

The NRC staff addressed this issue by reviewing Mercury work packages for evidence of added or changed heat numbers. After examining a random sample of heat numbers for tubing, fittings, valves, and filler material from the packages, the staff found that the records were adequate to show the acceptability of the material for its intended use.

The Mercury weld records were difficult to follow because of crossouts, weld deletions, additions, and a poor system of recording applicable notes. The records consisted of photocopied material and original pen-and-ink data. Falsification of heat numbers could not be determined from the staff review conducted. *The NRC staff also walked down 19 installations to verify heat number marking and found the numbers to be correct.*

Mercury QC and document review personnel involved in material traceability problems are no longer on site and were not interviewed.

Numerous NCRs and DRs were issued on material traceability problems. The following are typical examples.

NCR-W3-4593 - This NCR identified Mercury installed tubing which did not have heat number traceability. To resolve this NCR, five samples of installed tubing were cut and sent to a testing laboratory for analysis. The analysis revealed that the tubing was SA-213 Type 316, which was acceptable. The NCR was then closed, and the NRC staff considers this action acceptable.

NCR-W3-6943 and W3-7538 - These NCRs identified the loss of heat number traceability by Mercury, which caused a concern as to whether the thin wall tubing had been installed in the system requiring heavy wall tubing. To resolve this NCR the tubing was ultrasonically tested (UT). The UT identified that heavy wall tubing had been installed in the appropriate system and this NCR was closed. The NRC staff considers this action acceptable.

NCR W3-3919 - This NCR was initiated because of a tubing crack discovered during a Reactor Coolant hydrostatic pressure test. This NCR resulted in SCD #61 being issued. This NCR and SCD should be reopened because the testing and disposition appear invalid. For details (See Allegation A-33). *W3-3919* X

Discrepancy Report - An EBASCO quality control review turned up discrepancies in heat numbers for tubing unions between Mercury inspection records and system isometric drawings and issued a discrepancy report. The discrepancy report initiated Field Verification Inspection Requests to verify heat number discrepancies and to correct Mercury inspection records to substantiate that installed hardware is accurately depicted on system isometric drawings. EBASCO QC made over 4800 such comparisons in correcting these discrepancies. The NRC staff review found this action acceptable.

In conclusion the NRC staff found that Mercury's heat number traceability to installed material was adequate. Therefore, this allegation has neither safety significance nor generic implications. *However, Allegation A-33 did identify some problems with heat number traceability. Staff*

Potential Violations: ~~None.~~

*Pending a review of NRC OI "Report of Investigation"*

Actions Required: None.

#### References

1. Mercury Company Procedure QPC 301D, Rev. 4, Quality Assurance Records Control.
2. EBASCO Procedure QAI-13, Rev. 1, Correction of Site Generated QA/QC Records.
3. EBASCO Interoffice Memo's W3QAIRG-0785, dated September 8, 1983 and W3QA-26548 dated September 26, 1983.
4. EBASCO Mercury Program Milestone Completion for Field Verifications.

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