



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA ST., N.W., SUITE 3100
 ATLANTA, GEORGIA 30303

Report Nos. 50-259/80-44, 50-260/80-41 and 50-296/80-40

Licensee: Tennessee Valley Authority
 500A Chestnut Street
 Chattanooga, TN 37401

Facility: Browns Ferry

Docket Nos. 50-259, 50-260, 50-296

License Nos. DPR-33, DPR-52, DPR-68

Inspection at Browns Ferry site, Athens, Alabama

Inspector: E. H. Brooks 1-5-81
 E. H. Brooks Date Signed

Approved by: D. Quick 1-21-81
 D. Quick, Section Chief, RONS Date Signed

SUMMARY

Inspection on November 24-26, 1980

Areas Inspected

This routine, unannounced inspection involved 23 inspector-hours on site in the areas of main steam isolation valve testing (Unit 3) and inspection of pipe support and restraint systems (Units 1, 2, 3)

Results

Of the areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

Licensee Employees

- *H. L. Abercrombie, Plant Manager
- *J. L. Harness, Asst. Plant Manager
- *R. Smith, Quality Assurance Supervisor
- *R. Cole, Office of Power, Q.A. Supervisor
- *K. Clark, Supervisor Containment Test Section
- *T. Chinn, Compliance Office

Other licensee employees contacted included construction craftsmen, technicians, operators, mechanics, security force members, and office personnel.

NRC Resident Inspector

- *R. Sullivan
- *G. Paulk
- *J. Chase

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on November 26, 1980. with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Unresolved item (50-296/78-30-03): On October 31, 1978 inspection of hydraulic snubbers installed in Unit 3 revealed that general service lubricant had been injected into the reservoirs of several hydraulic snubbers which normally contain high quality radiation resistant hydraulic fluid. Further review disclosed a similar situation existed on Unit 2. The inspector could not determine by inspection of installed snubbers or review of the licensee's inspection documentation that the corrective action proposed by the licensee has adequately resolved the problems. The licensee agreed to summarize all actions taken such as additional inspection, testing, rebuilding, modifications, etc. to assure that all installed snubbers are free of contamination and that the potential for future contamination has been eliminated. The licensee has submitted a summary of actions taken to the NRC Regional Office. This matter of contaminated snubbers and the corrective actions taken by the licensee is under review and is still considered to be unresolved subject to further review.

4. Unresolved Items

Unresolved items were not identified during this inspection.



5. Inspection of Pipe Support and Restraint Systems

A visual inspection of safety related snubbers outside containment was performed by the inspector on all three Browns Ferry units. The Bergen-Paterson snubbers inspected were fitted with fabricated wire rings installed on the alemite fittings to prevent inadvertent lubrication of the snubber reservoirs. Metal warning labels were also attached to each snubber stating "use silicon fluid only." These were corrective actions provided by the licensee in accordance with Licensee Event Report 78-030.

The licensee advised that a "foreign substance" was found in the fluid of a Unit 2 snubber during functional testing and that samples of the substance were being analyzed at the TVA central laboratory. The licensee stated that alemite fittings on all Bergen-Paterson snubbers installed in all three reactor plants were removed for visual examination as a means for identifying inadvertent lubrication. As discussed in Paragraph 3 above, the licensee will provide assurance that all installed snubbers are free of contamination and the potential for future contamination has been eliminated.

In accordance with technical specifications, the licensee is currently inspecting snubbers on all three units on an operating cycle schedule. Documentation of the current and last preceding snubber inspection was provided for the inspectors review.

The licensee was advised of a broken drain line support in the area of R.19.T, T-LINE elevation 593. A pipe hanger on the reactor building component cooling water line was also observed to be unattached in this same general area. The licensee agreed to investigate and correct as necessary.

6. Main Steam Isolation Valve Testing

The inspector witnessed the start of MSIV testing on Unit 3. While pressurizing between the two MSIV's installed in each of the four main steam lines, leakage exceeded the reference leak rate of 11.5 SCFH per valve, contrary to Technical Specification 4.7.2.i. Testing was halted at this point to permit disassembly of the inboard (inside containment) MSIV.

The testing procedure followed by the licensee permits disassembly and sealing of the inboard isolation valve in order that the outboard (outside containment) isolation valve can be pressure tested individually and the resulting leakage compared with the total leakage.

Prior to sealing of the inner valve, the leakage for both valves in the D steam line, although not accurately measured, was on the order of 2900 SCFH at 10 psig pressure between the valves, which greatly exceeds the technical specification criteria of 11.5 SCFH per valve at 25 psig pressure. Similar leakage rates occurred also in the A and B steamlines.

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Leakage in the C steamline although exceeding the acceptance criteria was not of such magnitude as the other three lines.

Failure of MSIV's to meet the leak testing criteria has been consistent on all three units in the past, requiring valve repair to reduce the leakage to within the acceptance criteria. Licensee event reports of MSIV leakage in some recent tests include the following:

50-296/78-25
50-259/78-34
50-259/77-23
50-259/79-03
50-260/79-13
50-260/79-07
50-260/78-09
50-259/78-34
50-296/79-14
50-260/79-14

The licensee was advised at the exit interview that discussion with the regional office concluded that MSIV leakage in the Browns Ferry reactor plants constitutes a significant safety problem, and that it will be reported to NRC Headquarters along with recommendations that corrective action be required either in the form of revised testing requirements or system modification to include leakage control systems as proposed in Regulatory Guide 1.9.6.

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