



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

Report Nos. 50-259/82-19, 50-260/82-19 and 50-296/82-19

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

Facility Name: Browns Ferry Nuclear Plant

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

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

Inspection at Browns Ferry site near Athens, Alabama

Inspectors: *[Signature]*
J. W. Chase

6/30/82
Date Signed

[Signature]
G. L. Paulk

6/30/82
Date Signed

Approved by: *[Signature]*
F. S. Cantrell, Section Chief, Division of
Projects and Resident Programs

6/30/82
Date Signed

SUMMARY

Inspection on May 26 - June 25, 1982

Areas Inspected

This routine inspection involved 195 resident inspector-hours in the areas of operational safety, reportable occurrences, surveillance testing, reactor trips, maintenance observations, TMI action items.

Results

Of the six areas inspected, no violations or deviations were identified in five areas. One violation was identified in one area; maintenance observation (Violation of technical specifications 6.3.D.1, paragraph 9).

DETAILS

1. Persons Contacted

G. T. Jones, Power Plant Superintendent
J. R. Bynum, Assistant Power Plant Superintendent
J. R. Pittman, Assistant Power Plant Superintendent
L. W. Jones, Quality Assurance Supervisor
W. C. Thomison, Engineering Section Supervisor
A. L. Clement, Chemical Unit Supervisor
D. C. Mims, Engineering and Test Unit Supervisor
A. L. Burnette, Operations Supervisor
R. Hunkapillar, Operations Section Supervisor
T. L. Chinn, Plant Compliance Supervisor
M. W. Haney, Mechanical Maintenance Section Supervisor
T. D. Cosby, Electrical Maintenance Section Supervisor
R. E. Burns, Instrument Maintenance Section Supervisor
J. E. Swindell, Field Services Supervisor
A. W. Sorrell, Supervisor, Radiation Control Unit
R. E. Jackson, Chief Public Safety
R. Cole, QA Site Representative, Office of Power

Other licensee employees contacted included licensed reactor operators and senior reactor operators, auxiliary operators, craftsmen, technicians, public safety officers, Quality Assurance, Quality Control and engineering personnel.

2. Management Interviews

Management interviews were conducted on May 28, June 4, 11, 18 and 25, 1982, with the Power Plant Superintendent and/or the Assistant Power Plant Superintendents and other members of his staff. The licensee was informed of one violation identified during this report period. The licensee did not object to the violation identified.

3. Licensee Action on Previous Inspection Findings

(Closed) Deviation (259/82-12-04) Failure to update MSECC IP10. The licensee took corrective action and updated MSECC IP10. The inspector had no further questions.

(Closed) Violation (259, 260, 296/82-06-03) Failure to stroke time test CAD vent valves. The inspector reviewed the updated surveillance instruction (SI 4.7.D.1.a). A technical specification revision is committed to by licensee. The inspector had no further questions.

(Closed) Violation (259, 260, 296/82-06-01) Failure to follow procedures. The inspector reviewed the corrective action taken by the licensee. The inspector had no further questions.

4. Unresolved Items

There was no unresolved items during this report period.

5. Operational Safety

The inspectors kept informed on a daily basis of the overall plant status and any significant safety matters related to plant operations. Daily discussions were held each morning with plant management and various members of the plant operating staff.

The inspectors made frequent visits to the control room such that each was visited at least daily when an inspector was on site. Observations included instrument readings, setpoints and recordings; status of operating systems; status and alignments of emergency standby systems; purpose of temporary tags on equipment controls and switches; annunciator alarms; adherence to procedures; adherence to limiting conditions for operations; temporary alterations in effect; daily journals and data sheet entries; and control room manning. This inspection activity also included numerous informal discussions with operators and their supervisors.

General plant tours were conducted on at least a weekly basis. Portions of the turbine building, each reactor building and outside areas were visited. Observations included valve positions and system alignment; snubber and hanger conditions; instrument readings; housekeeping; radiation area controls; tag controls on equipment; work activities in progress; vital area controls; personnel badging, personnel search and escort; and vehicle search and escort. Informal discussions were held with selected plant personnel in their functional areas during these tours. In addition a complete walkdown which included valve alignment, instrument alignment, and switch positions was performed on the Residual Heat Removal Service Water System (RHRSW).

During the walkdown of the RHRSW system, the inspector noted that the air vacuum valve on the A2 RHRSW pump discharge side pipe had a broken upper float guide bar. The air vacuum valve was previously replaced in August 1981 due to the same failure. In August, 1981 the float became jammed during the pump operation and the discharged water from the valve flooded the "A" RHRSW pump room. Details are delineated in inspection report 81-28. The licensee established recurrence control by setting up reinspection of air vacuum valves on an operating cycle basis. Next operating cycle will be the August, 1982 Unit 2 refueling outage. The valve has failed prior to the reinspection schedule established, therefore, the inspector requested a reevaluation of the inspection interval to assure proper system operation. The Plant Superintendent responded that the inspection interval would be reviewed. The air vacuum valve was repaired and system returned to full service. This item will remain open until the inspection interval is analyzed for increased frequency (259, 260, 296/82-19-01).

During an inspection of the control rooms, the inspector noted a high drywell temperature alarm actuated on Unit 1. The inspector discussed the

alarm with the Unit Operator and Shift Engineer to ensure corrective action had been taken per Operating Instruction (OI)-64, Primary Containment Unit 1. During this inspection, it was determined that OI-64 had two separate action paragraphs for high drywell temperature. The licensee has committed to combining these paragraphs into one to clarify the procedure. (259/82-19-02).

6. Reportable Occurrence

The below listed licensee event reports (LERs) were reviewed to determine if the information provided met NRC reporting requirements. The determination included adequacy of event description and corrective action taken or planned, existence of potential generic problems and the relative safety significance of each event. Additional inplant reviews and discussions with plant personnel as appropriate were conducted for those reports indicated by an asterisk:

LER No.	Date	Event
*259/80-11 R-4	5-04-82	Loss of secondary containment through containment purge and venting system
*259/82-12 R-1	5-10-82	RHR minimum flow valve which failed to close.
259/82-24	4-30-82	Failure of flow transmitter.
*259/82-25	5-05-82	Scram discharge volume level switch failed to operate.
*259/82-28	5-26-82	UV ready on S/D board D found out of tolerance
*260/81-62	12-15-81	Main steam line radiation monitor erratic.
*260/82-01	1-28-82	Input error to process computer.
260/82-13	5-10-82	2-PS-68-96 pressure switch drifted.
*296/80-07 R-1	5-18-82	Loss of off-site power.
*296/81-65 R-1	5-04-82	3-FCV-71-3 would not close electrically.
*296/82-08	4-29-82	Inadvertent disconnection of sample line to CAM 3-90-250
296/82-09	5-05-82	Main steam line low pressure switches drifted.
296/82-10	5-05-82	Drywell pressure switch drifted.

*296/82-16	5-26-82	Wiring error made on emergency cooling water pump.
*296/82-19	5-28-82	Failure of H2-O2 flow control solenoid.
296/82-13	5-20-82	Drywell pressure switch setpoint had drifted.
*296/82-14	5-24-82	Turbine building roof and exhaust radiation alarm malfunction.
*296/82-15	5-13-82	Failure to perform surveillance instruction within scheduled time period.

7. Surveillance Testing Observation

The inspectors observed the performance of the below listed surveillance procedures. The inspection consisted of a review of the procedure for technical adequacy, conformance to technical specifications, verification of test instrument calibration, observation on the conduct of the test, removal from service and return to service of the system and a review of test data.

- a. Refueling Test Instruction (RTI)-32A Recirc MG Set Speed Control
- b. Surveillance Instruction (SI)-4.1.B.2 Average Power Range Monitor Gain Adjustment Factor
- c. SI-4.11.C.1 Testing of Smoke and Heat Detectors
- d. SI-4.8.B.4-2 Turbine Building Ventilation Monitoring System

In the above area, no violations or deviations were identified.

8. Reactor Trips

The inspectors reviewed activities associated with the below listed reactor trips during this report period. The review included determination of cause, safety significance, performance of personnel and systems, and corrective action. The inspectors examined instrument recordings, computer printouts, operations journals entries, scram reports and had discussions with operations, maintenance and engineering support personnel as appropriate.

On April 19, 1982, Unit 1 tripped from approximately 75% power. The cause of the trip was the reactor operator securing steam to the "C" reactor feed pump vice the "A" reactor feed pump. (The "A" reactor feed pump had been secured previously for maintenance.) The operator immediately reduced power, and reset the "A" RFP to regain water level; however, the "A" and "B" RFP overloaded the two condensate pumps that were running and they tripped on low net positive suction pressure. A low reactor water level occurred at

this point resulting in a reactor scram. No safety valves lifted. All safety systems performed as required.

9. Maintenance Observation

During this report period, the inspectors observed the below listed maintenance activities for procedure adequacy, adherence to procedure, proper tagouts, adherence to Technical Specifications, radiological controls, and adherence to Quality Control hold points:

- a. Torus modifications Unit 2
- b. Mechanical Maintenance Instruction (MMI)-28, Change out of control rod Drive Hydraulic Control Unit Module
- c. Repair of mechanical leak on fire protection piping
- d. Repair of Unit 2 fire protection system deluge valve.

While observing the torus modification work in progress, the inspector determined that two high radiation areas in the torus area were not adequately posted. At the barrier, one area read 200 mr/hr and the other 120 mr/hr. These barriers were posted by stanchions which were subject to inadvertent movement by personnel working in the torus area. Upon notification by the inspector of the problem, the licensee removed the stanchions and affixed the high radiation barrier to the torus supports to prevent movement.

The Plant Superintendent was informed that failure to properly barricade the two high radiation areas was a violation of Technical Specification 6.3.D.1 which requires each high radiation area to be barricaded. (260/82-19-03).

10. TMI Action Items

During this report period, the inspector reviewed the licensee's implementation of Item I.A.1.3, Shift Manning. This item recommends for a three unit site with two control rooms (3 Units operating), three SROs on shift to provide continuous coverage in each control room and five ROs in which three are at the panels and two are backup operators while all three units are operating. Browns Ferry does not meet this recommendation in that they do not require an SRO in the control rooms at all times and they have four ROs on shift vice five when all three units are operating.

This item will remain open until satisfactory completion of discussions between TVA and the NRC.