



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

Report Nos. 50-259/79-27, 50-260/79-27, and 50-296/79-27

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

Facility: 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 Decatur, Alabama

Inspected by:

B. W. Riley  
R. F. Sullivan

11/8/79  
Date Signed

Approved by:

H. C. Dance  
H. C. Dance, Section Chief, RONS Branch

11/8/79  
Date Signed

#### SUMMARY

Inspected on August 6 - September 14, 1979

#### Areas Inspected

This routine inspection involved 156 resident inspector-hours in the areas of plant operations, plant tours, reportable occurrences, organization, refueling, IE Circular followup, plant physical protection and radiation area control.

#### Results

Of the eight areas inspected, no apparent items of noncompliance or deviations were identified in six areas. One item of apparent noncompliance was found in each of two areas (Infraction - failure to follow procedures during transport of steam separator, paragraph 9) (Infraction - failure to provide escort in protected area, paragraph 10).

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5. Plant Operations

The inspector kept informed on a daily basis of the overall plant status and any significant safety matters related to plant operations. Daily discussions were held with plant management and various members of the operations staff. Frequent visits were made to the shift engineers office and control rooms to review current reactor operating status. Special visits to specific locations in the protected areas were made as deemed advisable to observe activities and to verify system or component status.

Selected portions of the daily journals and operations data sheets were reviewed on at least a weekly basis during the report period.

The inspector made general plant tours on the following dates: August 14, 23, 31, September 6, 10, and 12, 1979. Selected areas in the turbine building, reactor buildings and the outside areas were visited. Observations included witnessing work activities in progress, status of operating and standby safety systems, valve positions, snubber condition, instrument readings and recordings, annunciator alarms, housekeeping, radiation area controls and vital area controls. Informal discussions were held with operators and other personnel on work activities and equipment status.

The inspector witnessed a startup of the Unit 3 reactor on August 17, 1979. Shift change was observed on August 13 in the Unit 1 and 2 control room and on September 7, 1979 on the refueling floor. No items of noncompliance or deviations were identified in the above area.

6. IE Circular Followup

The inspector reviewed licensee action on the following circulars:

IEC 78-13, Operability of Service Water Pumps

IEC 79-10, Pipefittings Manufactured From Unacceptable Material

IEC 79-15, Bursting of High Pressure Hose and Malfunction of Relief Valve and "O"-Ring In Certain Self-Contained Breathing Apparatus.

Discussions were held with licensee personnel and internal correspondence with respect to the Circulars was examined. Licensee action had been completed or initiated with scheduled completion dates provided.

The inspector had no further questions.

7. Reportable Occurrences Review

The below listed licensee event reports were reviewed to determine if the information provided met NRC reporting requirements. The determination included adequacy of event description and corrective action taken or



## DETAILS

### 1. Persons Contacted

#### Licensee Employees

H. L. Abercrombie, Plant Superintendent  
J. L. Harness, Assistant Plant Superintendent  
J. B. Studdard, Operations Supervisor  
R. Hunkapillar, Assistant Operations Supervisor  
J. A. Teague, Maintenance Supervisor, Electrical  
M. A. Haney, Maintenance Supervisor, Mechanical  
R. G. Metke, Results Section Supervisor  
G. T. Jones, Outage Director  
J. W. Martin, Refuel Floor Coordinator  
R. T. Smith, QA Supervisor  
W. C. Thomison, Assistant Results Supervisor  
S. G. Bugg, Plant Health Physicist  
D. C. Cummin, Outage Health Physicist  
A. L. Burnett, Shift Engineer  
R. R. Smallwood, Shift Engineer  
R. E. Jackson, Captain, Public Safety  
J. D. Glover, Shift Engineer  
R. Cole, QA Site Representative, Officer of Power

Other licensee employees contacted included licensed Senior Reactor Operators and Reactor Operators, auxiliary operators, craftsmen, technicians, public safety officers, QA personnel and engineering personnel.

### 2. Management Interviews

Management interviews were conducted on August 10, 17, 24, 31 and September 5, 7, 11, and 14, 1979 with the Plant Superintendent and selected members of his staff. The inspector summarized the scope and findings of his inspection activities. The licensee was informed that two apparent items of noncompliance were identified during this report period. The inspector was informed that corrective action had been taken to improve visitor control. The plant superintendent took exception to the second item dealing with failure to follow procedure but indicated that a procedure revision was being considered.

### 3. Licensee Action on Previous Inspection Findings

Not inspected.

### 4. Unresolved Items

No unresolved items were identified during this inspection.



planned, existence of potential generic problems and the relative safety significance of each event.

LER No.	Date	Event
259/793	2/14/79	Local leak rate test exceeded limit
259/793 RI	3/16/79	
259/793 R2	3/23/79	
259/7915	9/4/79	Smoke detector inoperable
259/7916	8/31/79	Breaker for Start bus "1B" inoperative
260/7918	8/24/79	Torus vacuum breaker inoperative
260/7919	8/1/79	Drywell pressure switch setpoint out of limits
296/7911	8/8/79	Torus vacuum breakers set out of limits

Corrective action indicated on the above items was determined to be adequate. The inspector had no further questions in the above reports.

There were four reports identified by the inspector which did not adequately address recurrent control. These were 259/792, 260/7915, 296/796 and 296/7910. Plant management agreed to submit revisions to these LERs which would provide the needed information.

No items of noncompliance or deviations were identified.

#### 8. Plant Health Physics Organization

The inspector conducted a review of the recent changes within the Browns Ferry Health Physics organization and the qualifications of the assigned personnel. Since June 17, 1979, when additional supervisory positions were authorized, selection and staffing has been underway.

The new position of Assistant Plant Health Physicist was filled on August 7, 1979, by a qualified Health Physicist. During a refueling outage this individual functions as the Outage Health Physicist. Another new position was the placement of a Shift Supervisor on each of the rotating shifts. Each shift in turn has a Shift Coordinator (non-supervisory position) and a regular crew of at least four Health Physics Technicians.

The inspector reviewed the training and work experience records of all the Health Physics Shift Supervisors, Coordinators, and Technicians currently employed by TVA at Browns Ferry.

Technical Specification 6.1.E requires that the above personnel meet or exceed the minimum qualification levels described in ANSI N18.1-1971. The inspector determined that all personnel subject to his review met the stated requirements.



9. Refuel Floor Activities

During the report period the inspector made visits to the refuel floor to review Unit 3 refueling activities including observing work in progress and discussions with personnel involved.

On August 29, 1979, the inspector was made aware by plant management of certain workers concern that unnecessary personnel exposure was received during transfer of the steam separator assembly from the reactor cavity to its storage pit on August 28, 1979.

The inspector reviewed the circumstances of the event to determine compliance with regulatory requirements. This review included examination of the written procedure under which the task was performed, interviews with supervisors involved, discussions with Health Physics personnel, interviews with several of the craft personnel who received the highest radiation exposure and examination of exposure records.

The inspector determined that the initial raising of the steam separator from the reactor cavity was performed according to the procedure, MMI 1, which permits the separator to be raised as the cavity and adjoining storage pit are being flooded. This permits the crane hook to remain free of the contaminated water and usually results in the top of the separator breaking the water surface by no more than a foot. On this occasion flooding of the cavity was temporarily halted when the level was about four feet from full in order to switch to a new water supply. There was some misunderstanding on the length of delay this could cause and the decision was made to continue raising the separator and transfer it to the storage pit with the water level below full. Supervision determined that the procedure and past practice permitted the job to proceed.

Dose rates with about one foot of the separator out of water were 50 mrem/hr. Dose rates to personnel working near the separator with 4 to 6 feet of the top out of water reached 700 mrem/hr except for a short time at 1500 mrem/hr to untangle an air hose. Dosimeter readings revealed that radiation received by each of 10 personnel involved was below the NRC limit.

The inspector concluded that the licensee was in apparent noncompliance with Technical Specification 6.3.A for failure to adhere to approved procedures (296/79-27-01). Two procedures were involved.

The first, MMI 1, which covers the steam separator removal and storage has on page 94 the step which states, "Transport the assembly under water to its storage area in the dryer separator storage pit." Contrary to the above, the separator assembly was transferred with low water level such that the top 4 to 6 feet of the assembly was out of the water.

The second procedure, RCI 1, on the radiological hygiene program, on page 3, requires that the HP Supervisor's approval be obtained for dose rates which exceed 1 rem/hr. Contrary to the above, HP Supervisor's approval was not obtained for dose rates which exceeded 1 rem/hr.



10. Plant Physical Protection

During the course of routine inspection duties, the inspector included observations of certain plant physical activities. These encompassed personnel badging, searching, personnel escort, vehicle search and escort, vital area access control and physical barriers.

On September 5, 1979 the inspector encountered two TVA employees from Design who were wearing Visitor badges and were not accompanied by an escort. The employees were unable to identify or know the whereabouts of their assigned escort. This matter was called to the attention of Outage management and a qualified escort was promptly assigned.

The inspector identified this as an item of apparent noncompliance (259/79-27-01, 260/79-27-01, 296/79-27-02) with Paragraph 1.7 of the Security Plan which requires that an escort be provided for individuals not authorized to enter protected areas without escort.

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