



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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July 23, 2001

EA-99-234

Tennessee Valley Authority
ATTN: Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

**SUBJECT: BROWNS FERRY NUCLEAR PLANT - NRC INTEGRATED INSPECTION
REPORT 50-259/01-02, 50-260/01-02, 50-296/01-02**

Dear Mr. Scalice:

On June 23, 2001, the NRC completed an inspection at your Browns Ferry 1, 2, & 3 reactor facilities. The enclosed report presents the results of that inspection which were discussed on June 28, 2001, with Mr. R. G. Jones and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection the inspectors did not identify any findings of significance. However, on February 7, 2000, a Severity Level II Notice of Violation was issued to TVA. This violation involved employment discrimination contrary to the requirements of 10 CFR 50.7, "Employee Protection," in that TVA did not select a former employee to a competitive position in the corporate chemistry organization in 1996, due, at least in part, to his engagement in protected activities. The violation was directly related to your corporate office, and not site-specific; however, the violation was required to be docketed against Browns Ferry and your other two nuclear facilities. The enclosed report provides the NRC administrative tracking information for this violation against the Browns Ferry docket numbers.

TVA

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In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Paul E. Fredrickson, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Nos. 50-259, 50-260, 50-296
License Nos. DPR-33, DPR-52, DPR-68

Enclosure: NRC Integrated Inspection Report
w/Attachment

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-259, 50-260, 50-296
License Nos: DPR-33, DPR-52, DPR-68

Report No: 50-259/01-02, 50-260/01-02, 50-296/01-02

Licensee: Tennessee Valley Authority (TVA)

Facility: Browns Ferry Nuclear Plant, Units 1, 2, & 3

Location: Corner of Shaw and Nuclear Plant Roads
Athens, AL 35611

Dates: March 25 - June 23, 2001

Inspectors: W. Smith, Senior Resident Inspector
J. Starefos, Resident Inspector
E. DiPaolo, Resident Inspector
W. Sartor, Senior Emergency Preparedness Inspector
(Sections 1EP1, 1EP4, 1EP6, 4OA1.4, .5, .6)
G. Salyers, Emergency Preparedness Inspector
(Sections 1EP1, 1EP4, 1EP6, 4OA1.4, .5, .6)
J. Wallo, Physical Security Inspector
(Sections 3PP3, 4OA2)
O. Smith, Jr., Physical Security Inspector
(Sections 3PP3, 4OA2)

Approved by: P. E. Fredrickson, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

Integrated Inspection Report 05000259-01-02, 05000260-01-02, 05000296-01-02, on 03/25-06/23/2001, 2001, Tennessee Valley Authority, Browns Ferry Plant, Units 1, 2 and 3.

The inspection was conducted by resident inspectors, regional emergency preparedness specialists, and regional physical security inspectors. The significance of most findings is indicated by their color (green, white, yellow, red) using IMC 0609 "Significance Determination Process," (SDP). Findings for which the SDP does not apply are indicated by "no color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

A. Inspector Identified Findings

Other Activities

Violation. On February 7, 2000, a Severity Level II violation with civil penalty was issued to the licensee. The violation was not site-specific and involved employment discrimination contrary to the requirements of 10 CFR 50.7, "Employee Protection," in that the licensee did not select a former employee to a competitive position in the corporate chemistry organization in 1996, due, at least in part, to his engagement in protected activities. On January 22, 2001, the licensee denied the violation and on May 4, an Order was issued sustaining the violation and imposing the civil penalty. On June 1, TVA requested an enforcement hearing on the Order. (Section 40A5).

B. Licensee Identified Violations

A violation of very low significance which was identified by the licensee has been reviewed by the inspectors. Corrective actions taken or planned by the licensee appear reasonable. This violation is listed in Section 40A7.

Report Details

Summary of Plant Status

Unit 1 has been shut down since March 19, 1985, and has remained in a long-term lay-up condition with the reactor defueled.

At the beginning of the inspection period, Unit 2 was shut down for refueling. On April 29, 2001, Unit 2 was restored to full power and was operated at or near full power for the remainder of the inspection period with the exception of scheduled brief reductions in power to adjust control rods and perform routine testing. The refueling outage duration was approximately 38 days.

Unit 3 operated at or near full power with the exception of scheduled brief reductions in power to adjust control rods and perform routine testing.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment

a. Inspection Scope

The inspectors performed a partial walkdown of the below-listed systems to verify redundant train operability while one train was out of service:

- Unit 2 residual heat removal (RHR) system loop II when RHR pump 2B was removed from service on April 27, 2001
- Batteries 2 & 3 while battery 1 was out of service for testing on May 22, 2001
- Unit 2 core spray loop II while loop I was inoperable for preventive maintenance on June 15, 2001

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors toured the below-listed plant areas to evaluate, as appropriate, conditions related to: (1) licensee control of transient combustibles and ignition sources; (2) the material condition and operational status of selected fire protection systems, equipment and features; and (3) the fire barriers used to prevent fire damage or fire propagation. Acceptance standards for the above conditions were delineated in the licensee's Fire Protection Plan.

- Fire Zones 2-3 and 2-4, consisting of Unit 2 reactor building elevation 593, including both RHR heat exchanger rooms
- Fire Area 1, Unit 1 reactor building selected areas
- Fire Zone 2-2 Unit 2 reactor building elevations 519-565 East
- Fire Zone 3-1, Unit 3 reactor building elevations 519-565 West and portions of Elevations 593, 621, and 639
- Fire Zone 3-2, Unit 3 reactor building elevations 519-565 East

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors observed portions of the licensee's Generic Letter 89-13 inspection and thermal performance testing of Unit 2 RHR 2D heat exchanger. The inspectors verified that any potential heat exchanger deficiencies which could mask degraded performance were identified, and that inspection and test results were appropriately categorized against acceptance criteria pre-established by Procedure 2-TI-322, RHR Heat Exchanger Testing, and were acceptable. The inspectors verified that the frequency of inspection established by the licensee was sufficient, given the site-specific potential for fouling.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspector observed reactor operator and senior reactor operator requalification training activities in the plant simulator and the subsequent evaluators' discussions and feedback to the crew, pursuant to 10 CFR 55.59. The inspector focused on high-risk operator actions, operating crew interactions, lessons learned from previous plant experiences, and assessing the evaluators' critique and feedback to the crew. The results of this inspection were discussed with the instructor in charge of the training.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

For the equipment issues described below, the inspectors reviewed the licensee's implementation of the Maintenance Rule (10 CFR 50.65) to assess the effectiveness of the licensee's maintenance efforts that apply to scoped structures, systems, and components (SSCs):

- Unit 3 control rod drive pump 3B failure occurring on January 7, 2001
- Unit 3 emergency diesel generator (EDG) B governor mechanical speed adjust motor failure occurring on January 28, 2001
- Unit 3 Division I emergency core cooling system (ECCS) inverter failure occurring March 13, 2001, including (a)(1) status goals
- Unit 2 standby liquid control (SLC) pump 2A failed to meet required flow rate on February 20, 2001
- Unit 2 reactor core isolation cooling (RCIC) functional failure because of downscale failure of flow controller 2-FIC-71-36A on April 23, 2001

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The objectives of this inspection were to verify that risk assessments were being performed when and as required by 10 CFR 50.65(a)(4). The inspectors evaluated the adequacy of the licensee's risk assessments and the implementation of compensatory measures for the planned maintenance activities listed below. The inspectors also verified that, upon identification of the emergent equipment maintenance listed below, the licensee had taken the necessary steps to plan and control the resulting emergent work activities to effectively manage and thus minimize that risk. For some emergent work, the inspectors verified that timely reassessment of the resultant plant risk was performed.

- Testing and repair of RHR pump 3C seal piping leak completed on May 6, 2001 (Emergent)
- RHR pump 2B check valve leakage issue reviewed on April 27, 2001 (Emergent)
- Primary containment isolation valve maintenance on the Unit 2 pressure suppression chamber head tank to Unit 2 RHR loop II supply line performed on May 15, 2001 (Emergent)
- Unit 3 diesel exhaust fan A declared inoperable on EDG 3A, 3B, 3C, 3D on May 23, 2001 (Emergent)
- Unit 3 HPCI inoperable due to high vibration found during flow testing, and resultant troubleshooting and repair of vibration monitor on May 3, 2001 (Emergent)

- Planning, risk assessment and resultant rescheduling of surveillance requirement to perform Unit 2, Division 1, 480 volt load shedding logic system functional test while at power on June 19, 2001 (Planned)

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutions

Unit 2 Scram During Refueling Outage

a. Inspection Scope

The inspectors reviewed personnel performance during activities surrounding a valid reactor protection actuation (scram) that occurred with Unit 2 in Mode 5 (Refueling) on April 3, 2001. At the time, the reactor was shut down and cooled down for refueling, and all control rods were already fully inserted. The scram signal originated from an actual water level in the scram discharge volume caused by leaking scram pilot valves, which was corrected during the outage. The review was conducted by the inspectors to verify that the operator response was appropriate and in accordance with applicable operating procedures.

Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following operability evaluations affecting mitigating systems or barrier integrity to ensure that operability was properly justified as permitted by Generic Letter 91-18, Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions, and the SSC remained available such that no unrecognized increase in risk occurred:

- Past operability evaluation of emergency equipment cooling water (EECW) system with check valve 0-CKV-67-679 stuck halfway open as determined by ASME Section XI inservice test results of March 23, 2001
- Opening torque for core spray loop I testable check valve 2-FCV-75-26 measured outside allowable range on March 31, 2001
- Residual heat removal service water (RHRSW) pump B1 operability for Unit 3 standby coolant supply following failure of ASME Section XI testing on April 19, 2001
- Operability evaluation by 10 CFR 50.59 safety evaluation of primary containment during repair of RHR pump 3C on May 6, 2001
- Operability evaluation of oil leak on B EECW discharge strainer gearbox including compensatory measures

- Engineering Work Request 01-ICE-068-024, operability evaluation of Unit 2, reactor recirculation pump 2A shaft seal with frequent, valid No. 1 and No. 2 seal leakage alarms

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspectors reviewed the status of operator workarounds for both units to determine if the functional capability of the system or operator reliability in responding to an initiating event was affected. This included evaluating the effect of the operator workaround on the operator's ability to implement abnormal or emergency operating procedures. The following operator workarounds were selected and reviewed in detail:

- Flow indicator 3-FI-064-0037, containment purge filter outlet flow, not available on control room panel 9-25.
- Keep fill supply to Unit 2 RHR loop II had to be supplemented with condensate via valve 74-831, which was kept throttled to minimize excess water to process, but must be opened when aligning keep fill piping.
- Unit 1 fuel pool cooling system abnormal alarm locked-in masking other alarms

The inspectors also reviewed the cumulative effects of operator workarounds that could increase an initiating event frequency or that could affect multiple mitigating systems. The review also considered the cumulative effects of operator workarounds on the ability of operators to respond in a correct and timely manner to plant transients and accidents.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the performance of the following activities to verify that the post maintenance test (PMT) addressed the nature of the work done and was adequate to verify system operability and functional capability:

- PMT associated with replacement of Unit 2 high pressure coolant injection (HPCI) system containment isolation valves 2-FCV-73-3 and 2-FCV-73-81 per Design Change Notice (DCN) 50287A-Stage 2 during the Unit 2 Cycle 11 Outage
- PMT of new digital electro hydraulic turbine and reactor pressure control modification completed during the refueling outage, in accordance with

Procedure 2 -PMT-BF-047.026, Unit 2 Digital EHC Post-Modification Power Ascension Test, completed on April 29, 2001

- PMT of Unit 3 Division I ECCS Inverter following repairs per work order (WO) 01-005278-000 on May 25, 2001
- PMT of EECW pump B3 after adjusting impeller clearances and alignment per WO 01-047180-000 on June 14, 2001
- PMT of battery charger 3 following repairs to rectifier connector per WO-01-005835-000 on June 22, 2001
- PMT of Unit 2 RCIC exhaust rupture disk following repairs and retorquing per WO-01-006061-000 on June 20, 2001

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities

a. Inspection Scope

The inspectors reviewed the licensee's Outage Safety Plan and contingency plans for Unit 2 Refueling Outage U2C11 to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the refueling outage, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the below-listed outage activities:

- Licensee configuration management, i.e., maintenance of defense-in-depth commensurate with the outage safety plan for key safety functions and compliance with the applicable technical specification (TS) when taking equipment out of service.
- Implementation of clearance activities and confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing.
- Installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication and an accounting for instrument error.
- Controls over the status and configuration of electrical systems to ensure that TS and outage safety plan requirements were met, and controls over switchyard activities.
- Monitoring of decay heat removal processes.
- Controls to ensure that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system.
- Reactor water inventory controls including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss.
- Controls over activities that could affect reactivity.
- Maintenance of secondary containment as required by TS.
- Refueling activities, including fuel handling and sipping to determine which fuel assemblies were leaking.

- Startup and ascension to full power operation, tracking of startup prerequisites, walkdown of the drywell (primary containment) to verify that debris had not been left which could block emergency core cooling system suction strainers, and reactor physics testing.
- Licensee identification and appropriate resolution of problems related to refueling outage activities.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors witnessed surveillance tests and/or reviewed test data of selected risk-significant SSCs, listed below, to assess, as appropriate, whether the SSCs met TS, updated final safety analysis report (UFSAR), and licensee procedure requirements, and to determine if the testing effectively demonstrated that the SSCs were operationally ready and capable of performing their intended safety functions:

- 2-SI-4.7.A.2.g-3/64a, Primary Containment Local Leak Rate Test, Primary Containment Ventilation: Penetrations X25 and X-205, performed on March 28, 2001
- 1-SI-4.5.B.11, RHR Unit 1 Crosstie for Unit 2 Operability, which included the quarterly ASME Section XI inservice test of RHR Pumps 1B and 1D and associated valves, performed on May 3, 2001
- 2-SR-3.3.5.1(DWP D-ADS), Core Standby Cooling Systems Automatic Depressurization System (ADS) Initiation High Drywell Pressure Instrument Channel D Calibration (20P-64-57D), performed on May 22, 2001
- 2/3-SR-3.4.6.1, Dose Equivalent Iodine 131 Concentration, performed on May 31, 2001
- 2-SI-4.7.A.2.g-3/74e, Primary Containment Local Leak Rate Test RHR Suppression Pool Spray: Penetration X-211B, reviewed data package from testing performed April 21-22, 2001; observed attempted air wedge test of 2-FCV-74-71 following previous penetration test failure.
- 3-SR-3.8.4.4(MB-3), Main Bank 3 Battery Modified Performance Test, performed June 19-22, 2001

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors conducted a screen of the licensee's list of active and pending temporary plant modifications (alterations), for the purpose of reviewing the details of temporary

alterations determined to be on systems ranked high in risk from a probabilistic safety assessment perspective.

During this inspection period, the inspectors selected Temporary Alteration Control Form (TACF) 3-01-001-031 and 3-01-002-031, which installed a push-button switch in parallel with the automatic low pressure cutout switch on the Unit 3 A and B control bay chillers. This allowed the operators to manually bypass the low pressure trip during chiller startup when cooling water temperature was low. The 10 CFR 50.59 screening and applicable sections of the UFSAR and TS were reviewed to verify that the alteration did not adversely affect the safety functions of important safety systems.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation

a. Inspection Scope

The inspectors reviewed the objectives and scenario for the Browns Ferry Nuclear Plant biennial, full-participation 2001 emergency response exercise to determine whether they were designed to suitably test major elements of the licensee's emergency plan.

The inspectors observed and evaluated the licensee's performance in the exercise, as well as selected activities related to the licensee's conduct and self-assessment of the exercise. The exercise was conducted on June 6, 2001 from 7:57 a.m. to 1:22 p.m. Licensee activities inspected during the exercise included those occurring in the control room simulator, technical support center, operational support center, and the central emergency control center. The NRC's evaluation focused on the risk-significant activities of event classification, notification of governmental authorities, onsite protective actions, offsite protective action recommendations, and accident mitigation. The inspectors also evaluated command and control, the transfer of emergency responsibilities between facilities, communications, adherence to procedures, and the overall implementation of the emergency plan. The inspectors attended the post-exercise critique to evaluate the licensee's self-assessment process, as well as the presentation of critique results to plant management.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

The inspectors reviewed changes to the Radiological Emergency Plan (REP), as promulgated in Revisions 48, 53, 55, 56, 57, and 59 against the requirements of 10 CFR 50.54(q) to determine whether any of those changes decreased REP effectiveness.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed an emergency preparedness training evolution and reviewed the drill scenario narrative to identify the expected timing and location of classification, notification, and protective action recommendation development activities. The inspectors verified the adequacy of the classification and notification activities. The licensee's drill critique was also attended and observed by the inspectors.

b. Findings

No findings of significance were identified.

3. **SAFEGUARDS**

Cornerstone: Physical Protection

3PP3 Response to Contingency Events

.1 Intrusion and Detection

a. Inspection Scope

The protected area intrusion detection system and assessment system required by the Physical Security Plan (PSP) were evaluated to determine if vulnerabilities could be identified. Nineteen detection zones were tested by the inspectors based on a visual assessment of their potential predictability and vulnerability. Seven day operational and continuing preventive maintenance testing procedures were observed to determine the level of adequacy and compliance with plant procedures.

b. Findings

No findings of significance were identified.

.2 Assessment Aids

a. Inspection Scope

The inspectors conducted an evaluation of the licensee's assessment capability. The quality of the assessment aids was evaluated against the PSP to determine if the alarm station operators could clearly recognize a threat in the intrusion detection zones. The inspectors assessed 15 areas to determine whether the licensee's camera assessment system was capable of automated call-up of fixed closed circuit television cameras to assess alarms emanating from the protected area perimeter.

b. Findings

No findings of significance were identified.

.3 Weapons Demonstration

a. Inspection Scope

Using the Contingency Response and Training and Qualification Plans as part of the basis, the inspectors evaluated the firearms proficiency by observing a range demonstration by 10 individuals selected by the inspectors. The inspectors observed the weapons demonstration to determine whether each of the selected individuals were capable of effectively engaging the targets using appropriate weapons from each type plant defensive position used as part of the defensive strategy. The inspectors observed the individuals firing from elevated positions, from behind barricades, barrels, and at fixed and moving targets.

b. Findings

No findings of significance were identified.

.4 Table-Top Exercises

a. Inspection Scope

The inspectors conducted four table-top exercises which focused on evaluating the response strategy to protect against an armed attack as defined in the Contingency Response Plan. The inspectors conducted table-top exercises to determine whether the licensee's armed response force defensive strategy demonstrated the ability to quickly focus responders on the adversaries' location, interdict the adversaries, provide defense-in-depth, and protect target sets against attack from the locations used during the table-top drills.

b. Findings

No findings of significance were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspection team randomly selected and screened licensee records for drills and exercises for the period of March 2000 through April 2001, maintenance work requests and problem evaluation reports to determine if the licensee was identifying problems related to these areas, and entering them into the corrective action program.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

Licensee records were reviewed to confirm the accuracy and completeness of performance indicator (PI) data in accordance with the guidance contained in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 0.

Cornerstone: Initiating Events

.1 Unplanned Transients per 7000 Critical Hours

a. Inspection Scope

The inspectors verified the accuracy and completeness of the licensee's second, third, and fourth quarter Unit 2 and 3 data for the year 2000 pertaining to Unplanned Transients per 7000 Critical Hours PI. Records reviewed included control room operator logs, corrective action program records, monthly operating report, and PI data on the NRC web site.

b. Findings

No findings of significance were identified.

Cornerstone: Mitigating Systems

.2 Heat Removal System (RCIC) Unavailability

a. Inspection Scope

The inspectors verified the accuracy and completeness of the licensee's data on the Unit 2 and 3 Heat Removal System RCIC Unavailability PI. The period covered was the second, third and fourth quarters of 2000 and the first quarter of 2001. Records reviewed included control room operator logs, corrective action program records, PI data maintained by the system engineer, and PI data appearing on the NRC web site.

b. Findings

No findings of significance were identified.

Cornerstone: Barrier Integrity

.3 Reactor Coolant System Specific Activity

a. Inspection Scope

The inspectors verified the accuracy and completeness of the licensee's second, third, and fourth quarter Unit 2 and 3 data for the year 2000 and first quarter 2001 pertaining to Reactor Coolant System Specific Activity PI. Records reviewed included licensee data for each applicable weekly sample, some of which were verified to be correct by comparison to the procedure data page attachment, and PI data on the NRC web site.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

.4 Emergency Response Organization (ERO) Drill/Exercise Performance PI

a. Inspection Scope

The inspectors verified the accuracy and completeness of the ERO Drill/Exercise Performance PI over the previous eight quarters through review of annual examination records.

b. Findings

No findings of significance were identified.

.5 ERO Drill Participation PI

a. Inspection Scope

The inspectors verified the accuracy and completeness of the ERO Drill Participation PI during the previous eight quarters through review of the training records and training sign-in sheets for randomly selected individuals from the 38 total key personnel assigned to positions in the ERO as of the end of the first quarter of 2001.

b. Findings

No findings of significance were identified.

.6 Alert and Notification System Reliability PI

a. Inspection Scope

The inspectors verified the accuracy and completeness of the Alert and Notification System Reliability PI through review of the total tests and successful test data summary sheets for the bi-weekly silent tests, monthly full cycle tests, and the annual growth test conducted from April 1, 2000 to March 31, 2001.

b. Findings

No findings of significance were identified.

40A3 Event Follow-up

(Closed) LER 50-260/2001-001-000: Reactor Scram While Shutdown due to High Scram Discharge Instrument Volume Caused by Scram Outlet Valve Leak-by. This event was discussed in Section 1R14. No new information was found during the review of this LER. This event did not constitute a violation of NRC requirements.

40A5 Other

.1 On February 7, 2000, a Severity Level II violation with civil penalty was issued to TVA. This violation involved employment discrimination contrary to the requirements of 10 CFR 50.7, "Employee Protection," in that TVA did not select a former employee to a competitive position in the corporate chemistry organization in 1996, due, at least in part, to his engagement in protected activities. On January 22, 2001, TVA denied the violation and on May 4, an Order was issued sustaining the violation and imposing the civil penalty. On June 1, TVA requested an enforcement hearing on the Order. Pending resolution of this violation, this issue is identified as Violation 50-259, 260, 296/01-02-01, TVA Corporate Employee Discrimination.

.2 (Closed) Violation 50-260,296/00-03-04: Failure to implement measuring and test equipment (M&TE) procedures. During a self-assessment in June 1999, the licensee identified that procedurally-required actions to issue and disposition nonconformance evaluations had not been taken for many items of M&TE when out-of-tolerance reports were received at the site following calibration testing by TVA's Central Laboratory Field Testing Services. Approximately 500 nonconformance reports were involved. Although no safety-related components were rendered inoperable because of out-of-tolerance M&TE used, the NRC Office of Investigations concluded that the M&TE Program Administrator had deliberately failed to process the 500 reports, in violation of TS 5.4.1., Procedures. The NRC held the licensee partially responsible for the violation, notwithstanding the Program Administrator's prompt resignation. A Severity Level III violation was cited against TVA on October 27, 2000.

The inspectors reviewed the licensee's corrective actions as committed in an August 25, 2000, TVA response to the violation. The first priority action was to reconcile the 500 reports and evaluate the potential impact on safety-related equipment. The inspectors sampled the reconciled reports and found no problems. Concurrently, actions were

implemented to get the M&TE Program under management control as described in the response. An M&TE summary report was incorporated into the site Plan-of-the-Day agenda, and was reviewed by the site management team on a weekly basis. The inspectors observed the weekly reviews and found them to be indicative of better controls over M&TE. The inspectors reviewed records of attendance and course outlines for the briefing of senior managers and a training course for first line supervisors emphasizing the potential pitfalls associated with single point supervision and control without backup or oversight. The material adequately covered lessons learned from the M&TE problem and another related past problem where a single individual was responsible for snubber testing and disposition of test results. This violation is closed.

4OA6 Management Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. R. G. Jones, and other members of licensee management on May 18, June 8, and June 28, 2001. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Annual Assessment and State/Local Officials Meeting Summary

The NRC Resident Inspectors and the Region II, Division of Reactor Projects Branch Chief assigned to Browns Ferry met on June 13, 2001 with TVA, to discuss the NRC's Reactor Oversight Process (ROP) and Browns Ferry the annual assessment of safety performance for the period of April 2, 2000 - March 31, 2001. The major topics addressed were: the NRC's assessment program, the results of the Browns Ferry assessment, and the NRC's Agency Action Matrix. Attendees included Browns Ferry site management, members of plant staff, several local officials, and news media personnel. Following the annual assessment meeting, a meeting was held with local officials to discuss the ROP and NRC activities involving Browns Ferry.

These meetings were open to the public. Information used for the discussions of the ROP is available from the NRC's document system (ADAMS) as accession number ML011980088. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

4OA7 Licensee Identified Violations

The following finding of very low significance was identified by the licensee and is a violation of NRC requirements, and meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as a non-cited violation (NCV).

The licensee was informed that if this NCV is denied, a response, with the basis for denial, should be provided, within 30 days of the date of this inspection report, to the U. S. Nuclear Regulatory Commission, Attn: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of

Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Browns Ferry facility.

<u>NCV Tracking Number</u>	<u>Requirement Licensee Failed to Meet</u>
50-260/01-02-02	<p>Technical Specification Surveillance Requirement (TSSR) 3.4.1.1 requires the flow balance between the reactor recirculation loops to be determined daily beginning 24 hours after the loops are placed in service. This surveillance supports LCO 3.4.1, which requires two recirculation loops in service to have matched flows when in Mode 1 or 2. On April 27, 2001, approximately five days after the recirculation loops were placed in service, the licensee identified that TSSR 3.4.1.1 had been missed. The TSSR was then completed with satisfactory results; however, as a consequence the Unit had been inadvertently taken from Mode 2 to Mode 1 without having met the surveillance requirements prerequisite to proceeding to Mode 1 as required by TSSR 3.0.4. This finding is identified in the licensee's corrective action program as PER 01-004386-000. (Green)</p>

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

T. Abney, Licensing Manager
A. Bhatnagar, Site Vice President
J. Corey, Radiation Protection and Chemistry Manager
T. Cornelius, Emergency Preparedness Supervisor
R. Golub, Acting Site Quality Assurance Manager
K. Singer, Executive Vice President
R. Jones, Plant Manager
J. Ogle, Security Manager
G. Little, Operations Manager
L. Maillet, BTWP Manager
T. Niessen, Jr., Site Support Manager
D. Sanchez, Maintenance and Modifications Manager
M. Scaggs, Assistant Plant Manager
J. Setliffe, Corporate Security Manager
R. Wiggall, Site Engineering Manager

NRC

R. Bernhard, Region II Senior Reactor Analyst

LIST OF ITEMS OPENED AND CLOSED

Opened

50-259, 260, 296/01-02-01	VIO	TVA Corporate Employee Discrimination (Section 40A5).
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Opened and Closed

50-260/01-02-02	NCV	Missed Surveillance on Recording and Verifying Recirculation Loop Balanced Flow (Section 40A7).
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Closed

50-260,296/00-03-04	EEl	Failure to Implement Measuring and Test Equipment Procedures (Section 40A3).
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