



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report Nos.: 50-259/89-43, 50-260/89-43, and 50-296/89-43

Licensee: Tennessee Valley Authority
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Docket Nos.: 50-259, 50-260, and 50-296

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

Facility Name: Browns Ferry Units 1, 2, and 3

Inspection at Browns Ferry Site near Decatur, Alabama

Inspection Conducted: September 11 to October 11, 1989

Inspector:	<u>Bruce A. Wilson for</u> K. D. Ivey, Jr., Resident Inspector	<u>11/2/89</u> Date Signed
Reviewed by:	<u>Bruce A. Wilson for</u> D. R. Carpenter, NRC Site Manager	<u>11/2/89</u> Date Signed
Approved by:	<u>Bruce A. Wilson for</u> W. S. Little, Section Chief, Inspection Programs, TVA Projects Division	<u>11/2/89</u> Date Signed

SUMMARY

Scope: This special, reactive inspection was conducted to review recent events and recurring problems concerning implementation of the TS required surveillance program. The inspection also included the followup of events at operating reactors, surveillance observation, and followup of open items.

Results: Four apparent violations were identified:

259, 260, 296/89-43-01: Failure to Maintain the Minimum Number of DGs Operable Due to an Inadequate SI (paragraph 2.a).

259, 260, 296/89-43-03: Failure to Sample DG Fuel Oil per TS Frequency (paragraph 2.b).

259, 260, 296/89-43-04: Failure to Maintain TS LCO Compensatory Measures for Inoperable Fire Hose Stations (paragraph 2.c).

260/89-43-05: Failure to Follow SIs & Inadequate SI (paragraph 4).

One unresolved item was identified concerning the adequacy of RHRSW flow through the RHR heat exchangers during the performance of O-SI-4.2.B-67, RHR Service Water Initiation Logic (paragraph 2.a).

One inspection follow-up item was identified concerning Non-intent Changes to Surveillance Instructions (paragraph 3).

The results of this inspection indicate that sufficient progress on the Surveillance Program Upgrade has not been made as evidenced by the breadth, depth, and number of violations cited by the NRC and LERs submitted by the Licensee. At this time the Surveillance Program at BFN would not support a restart of Unit 2.

REPORT DETAILS

1. Persons Contacted

Licensee Employees:

- *J. Bynum, Vice President, Nuclear Power Production
- *M. Medford, Vice President, Nuclear Technical Director
- *O. Zeringue, Site Director
- *G. Campbell, Plant Manager
- *S. Rudge, Site Programs Manager
- *M. Herrell, Plant Operations Manager
- *J. Swindell, Plant Support Manager
- *P. Salas, Acting Compliance Supervisor

Other licensee employees or contractors contacted included licensed reactor operators, craftsmen, and technicians; and quality assurance, design, and engineering personnel.

NRC Attendees

- *B. Wilson, Assistant Director for Inspection Programs
- *W. Little, Section Chief
- *D. Carpenter, Site Manager
- *K. Ivey, Resident Inspector

*Attended exit interview

Acronyms used throughout this report are listed in the last paragraph.

2. Onsite Followup of Events at Operating Power Reactors (93702)

The following events were reviewed during the performance of this special inspection:

- a. On August 15, 1989, the licensee performed procedure O-SI-4.2.B-67, RHR Service Water Initiation Logic, to determine operability of the initiation logic for automatic start signals to the EECW pumps. The system configuration used in the test included jumpering out the initiation logic for the EECW pumps. A caution in the procedure stated that operator action was required to manually start the EECW pumps in response to a DG start, a core spray pump start, a common accident situation, or a loss of the RCW system. Subsequent licensee review determined that inhibiting the automatic actuation of the EECW pumps made all eight of the DGs as well as other safety related equipment inoperable. The licensee notified the NRC of this event by a 10 CFR 50.72 4-hour non-emergency ENS report on August 24, 1989. This event was reported in LER 259/89-23.

The EECW pumps are required to automatically start to supply cooling water to the DGs and other safety related equipment. The failure to

maintain automatic EECW pump initiation operable made all eight DGs inoperable. TS 3.9.C.1 requires that at least two Unit 1 and 2 DGs and their associated 4 kV shutdown boards be operable whenever the reactor is in a cold shutdown condition with irradiated fuel in the reactor. The failure to maintain the minimum number of operable DGs is an apparent violation of TS 3.9.C.1 (VIO 259, 260, 296/89-43-01, Failure to Maintain the Minimum Number of DGs Operable Due to an Inadequate SI).

The licensee initiated an investigation into this event (RCA 89-66) which determined that the SI was revised in 1976 to add jumpering of the EECW auto-start capability to reduce the number of pump starts. The investigation also identified that the SI was reviewed by GE in October, 1985, as part of the Surveillance Instruction Review for Unit Startup (SIRUS) project; that the SI was reviewed on several occasions since the NPP SI upgrade program began; and that validation walkdowns were performed for the SI in June, 1988, and May, 1989. This SI was validated in accordance with SDSP 7.4, Procedure Review, on May 16, 1989. During power operation since 1976 this SI would have resulted in other systems such as core spray being inoperable.

Another concern identified during the performance of this SI was the adequacy of the valve lineup used in the SI. This lineup connected the discharge of all 12 of the EECW/RHRSW pumps to both EECW service and RHRSW service. Licensee personnel questioned whether the resulting flow would meet the requirements of TS 3.5.C.7 which requires 2 RHRSW pumps, associated with the selected RHR pumps, to be aligned for RHR heat exchanger service for each reactor vessel containing irradiated fuel. The licensee was performing a safety evaluation on this question at the end of this inspection. This issue is identified as Unresolved Item 259, 260, 296/89-43-02, Adequacy of RHRSW Flow During O-SI-4.2.B-67, and will remain open pending NRC review of the safety evaluation. This item must be resolved prior to Unit 2 restart.

- b. On September 12, 1989, the licensee initiated a LRED to address the acceptability of the frequency used in sampling DG fuel oil quality at BFN. Diesel fuel oil is supplied from an individual day tank (one day supply) and a seven-day tank for each of the eight DGs. TS 4.9.A.1.e requires that a sample of diesel fuel be checked for quality once a month. The TS does not specifically state that the tank supplying each DG shall be sampled. The licensee interpreted this to be monthly for each set of DGs, with the four DGs assigned to Units 1 and 2 (1A, 1B, 1C, & 1D) as one set and the four DGs assigned to Unit 3 (3A, 3B, 3C, & 3D) as the other set. In accordance with this interpretation, the licensee was sampling each set of seven-day storage tanks on a staggered basis (i.e. sampling one seven-day tank for a Unit 1/2 DG and one for a Unit 3 DG each month). Following this sampling frequency, it would take four months to complete one



cycle of sampling for all of the DGs. This interpretation does not meet the intent of the TS. This event was reported in LER 259/89-26.

Procedure O-SI-4.9.A.1.e, Diesel Generator Fuel Oil Analysis, implements the licensee's interpreted frequency for sampling DG fuel oil. This SI has been reviewed and was validated on June 6, 1989, in accordance with SDSP 7.4. The scope of the SI states that "Because the sets (DG sets) are not considered common, a fuel oil quality determination must be performed independently for each set." The fuel used for immediate operation of an individual DG is contained in the day tank and seven-day tank assigned to that DG. Each DG should be considered separately since sampling one seven-day tank verifies the fuel quality only for its assigned DG. The frequency of sampling the fuel oil supply of only two DGs per month does not meet the requirements of the TS. The failure to meet surveillance requirements for sampling the quality of DG fuel is an apparent violation of TS 4.9.A.1.e (VIO 259, 260, 296/89-43-03; Failure to Sample DG Fuel Oil per TS Frequency).

- c. On September 19, 1989, the licensee identified that compensatory measures for fire protection which were taken on June 28, 1989, had been discontinued. On June 28, due to a fire protection line leak and problems with an isolation valve, hose stations on Unit 2 Reactor Building elevations 565 U-R13 (2-26-878) and 541 P-R14 (2-26-877) were isolated. A gated wye connection and additional fire hose were installed on a hose station on elevation 565 U-R9 (2-26-861) to satisfy TS LCO 3.11.E.1.a for compensatory measures. In accordance with procedure FPP-2, Fire Protection-Attachments, a Fire Protection Equipment and Barrier Penetration Removal From Service Permit (Attachment F no. 89-553) was processed to implement these measures. Item 6 on the Attachment F indicated that a roving fire watch was required and was already in place per a separate Attachment F. FPP-2, Attachment F, step 6.4.3 requires that a fire watch have a copy of the Attachment F form authorizing the fire watch in his possession while performing those duties. However, the required roving fire watch did not identify that the compensatory measures had been removed. On September 9, 1989, a Quality Monitoring inspector identified that the gated wye and hose were missing and, therefore, compensatory measures were no longer in effect.

TS 3.11.E.1.a requires that when a required fire hose station is not operable, a gated wye be connected to the nearest operable hose station with sufficient hose to provide coverage for both areas. The failure to maintain TS LCO required compensatory measures is an apparent violation (VIO 259, 260, 296/89-43-04, Failure to Maintain TS LCO Compensatory Measures for Inoperable Fire Hose Stations).

Three violations were identified in this area. These violations were identified by the licensee but they are not being issued as a NCV because of similar violations which have occurred in the the surveillance program during the past two years (see paragraph 6).



3. Surveillance Observation (61726)

During this inspection period, an NRC inspector observed the performance of procedure 1/2-SI-4.9.A.1.d(B), Diesel Generator B Annual Inspection. Licensee personnel were knowledgeable in the requirements of the procedure. During the performance, nine non-intent procedure changes were required in order to complete the SI. Several of the NICs involved changing the order of steps in the procedure. One section called for an annunciator check prior to closing the DC control power breaker for the DG; however, with the breaker open and no control power to the annunciator panel, the steps were meaningless.

This SI was being performed to satisfy the surveillance requirements of TS 4.9.A.1.d and was also used to validate the SI in accordance with SDSP 7.4. The NRC inspector considers the large number of NICs needed to complete the SI as excessive since the SI had already been through the verification review. Some of the NICs would have been identified if a walkdown of the SI had been performed prior to approval of the SI. The lack of a preliminary walkdown is a weakness in the SI upgrade program which results in unnecessary problems during the first run of an SI.

The number of NICs being experienced and the proper use of NICs are of concern and will be reviewed further. This is identified as Inspector Follow-up Item 259, 260, 296/89-43-06, Non-intent Changes to Surveillance Instructions.

No violations or deviations were identified in the Surveillance Observation area.

4. Followup on Previous Inspection Items (92701)

(CLOSED) URI 260/88-35-01: Surveillance Testing Concerns.

This URI involved four events which resulted in inadvertent actuations of safety related equipment due to inadequate SI procedures and the failure to follow SI procedures. These events are summarized as follows:

- 1) On December 9, 1988, while operators were performing procedure 2-SI-4.2.B-45A (I), RHR Logic System Functional Test, a step in the procedure required that the local manual stop button be depressed. However, the operator depressed the pump start button. The 2D RHR pump started and ran for approximately five seconds. This event was reported in LER 260/88-16.
- 2) On December 17, 1988, during the performance of procedure 0-SI-4.9.A.1.b-1, Unit 1/2 DG A Load Acceptance Test, a start of the 2D RHR pump occurred. This occurred because of incorrect sequencing of steps in the procedure. Steps which initiate the logic to start the pump were performed prior to steps to preclude a start of the pump. This event was reported in LER 259/88-49.

- 3) On December 18, 1988, during the performance of procedure 0-SI-4.9.A.1.b-2, Unit 1/2 DG B Emergency Load Acceptance Test, the 2C Core Spray pump started. During the test, the wrong keylock switch was placed in the test position contrary to steps in the SI. When the next procedure step was taken, the 2C pump received a start signal because the logic was not inhibited by its test switch. This event was reported in LER 260/88-17.
- 4) On December 18, 1988, during the performance of procedure 2-SI-4.2.C-3(G), IRM Channel C Calibration, a technician installing a SI required jumper inadvertently grounded the jumper and shorted out a fuse supplying power to the RPS channel 2B IRM detectors. This resulted in a trip of RPS channel 2B (a half scram actuation). This event was reported in LER 260/88-18.

From discussions with the licensee, and further review of this item and the associated LERs, the inspector concluded that the event summarized in item 4 above was not caused by inadequacies in the SI or failure to follow the SI. The events summarized in items 1, 2, and 3, however, are examples of an apparent violation of TS 6.8.1.1.c for failure to maintain and implement SI procedures (VIO 260/89-43-05: Failure to Follow SIs and Inadequate SIs). URI 260/88-35-01 is closed.

One violation was identified during the Followup of Previous Inspection Items.

5. Surveillance Upgrade Program

On September 17, 1985, the NRC issued a request, pursuant to 10 CFR 50.54(f), that TVA submit information including plans for correcting the problems at BFN. In response to this request, TVA prepared Nuclear Performance Plans including NPP Volume 3 which identified the root causes of problems specifically related to BFN and defined plans for correcting them. One of the problems at BFN concerned surveillance program deficiencies which had resulted in numerous NRC violations. The root causes of the deficiencies were attributed to unclear SIs and failure to follow SIs. The NPP Volume 3 committed to give management attention to the surveillance program and implement a process to verify procedure adequacy prior to SI performance for Unit 2 startup. The SI review and upgrade process was implemented to ensure that TS requirements are fully met in SIs; that SIs are technically correct; and that SIs can be performed as written.

SDSP 7.4, Procedure Review, establishes the methods for the review, verification, and validation of procedures, including SIs, to ensure that they are technically adequate and incorporate appropriate acceptance criteria and quality requirements prior to approval. Procedures are given a verification review by a qualified reviewer prior to approval and validated after approval during the first-time performance of the procedure, by simulation, or by a walk-through of the procedure steps. SDSP 7.4 was revised on April 25, 1989, to include a procedure review checklist; incorporate industry standards for procedure review; and combine all procedure reviews into one comprehensive procedure.



6. Surveillance Program Review

NRC inspections conducted since January, 1988, identified 15 violations, including 22 examples, related to deficiencies in surveillance testing and implementation of TS LCO compensatory measures. There were 12 LERs submitted concerning events cited in the violations. There were 17 additional LERs submitted, including 27 examples. The examples include those in the four apparent violations detailed in the above paragraphs and their associated LERs.

The violations and additional LERs included 11 examples of inadequate SIs; 12 examples of failure to follow SIs by licensed operators, maintenance craftsmen, and chemistry technicians; 3 examples of the failure to meet scheduled TS surveillance frequencies; 2 examples of the failure to perform SIs implemented as compensatory actions; and 21 examples of failure to implement or maintain compensatory measures required by TS LCOs. The violations and LERs are summarized as follows:

a. Surveillance Instructions And Requirements

- 1) VIO 88-05-03: Two Examples of Failure to Follow Procedures and a Lack of Attention to Detail. This involved two examples of failure to follow a SI.
- 2) VIO 88-32-01: Two Examples of Failure to Follow Procedures. This included one example of failure to follow a SI. This event was reported in LER 260/88-11.
- 3) VIO 89-06-01: Nine Examples of Failure to Follow Procedures and Four Examples of Inadequate Procedures. This included four examples of failure to follow SIs and one example of an inadequate SI.
- 4) VIO 89-08-01: Failure to Follow Procedure by Not Removing a Jumper Installed During an IRM Surveillance. This involved one example of failure to follow a SI. This event was reported in LER 260/89-03.
- 5) VIO 89-08-02: Failure to Perform Weekly Surveillance on Shutdown Board Batteries. This involved one example where a SI frequency was exceeded. This event was reported in LER 260/89-04.
- 6) VIO 89-11-05: Failure to Satisfy TS 4.6.B.1.c. This involved one example of failure to perform compensatory sampling required by TS surveillance requirement 4.6.B.1.c for an inoperable continuous conductivity monitor. This event was reported in LER 296/89-02.
- 7) VIO 89-27-02: Failure to Meet TS Requirements for Operable RHR Loops. This involved one example where a SI frequency was exceeded. This event was reported in LER 260/89-19.

- 8) VIO 89-33-03: Failure To Follow SI Procedure. This involved one example of failure to follow a SI.
- 9) NCV 89-35-03: Missed SI Results in a TS Violation. This involved one example where a SI frequency was exceeded. This event was reported in LER 260/88-19.
- 10) VIO 89-43-01: Failure to Satisfy TS Due to Inadequate SI. This involved one example of an inadequate SI (see paragraph 2.a of this report). This event was reported in LER 259/89-23.
- 11) VIO 89-43-03: Failure to Sample DG Fuel Oil Per TS Frequency. This involved one example of an inadequate SI (see paragraph 2.b of this report). This event was reported in LER 259/89-26.
- 12) VIO 89-43-05: Failure to Follow SIs and Inadequate SIs. This included two examples of failure to follow SIs and one example of an inadequate SI (see paragraph 4 of this report). These events were reported in LERs 259/88-49, 260/88-16, and 260/88-17.
- 13) LER 259/88-08: SGTS Relative Humidity Heaters Have Not Been Tested in Accordance With TS Due to Inadequate Procedures. This involved one example of an inadequate SI.
- 14) LER 259/88-10: Inadequate Procedures Cause Two Cases of Missed Samples That Were Required to Compensate For Inoperable Effluent Radiation Monitors. This included one example of an inadequate SI.
- 15) LER 259/88-14: Surveillance Testing of Liquid Radioactive Waste Discharge Isolation Valves Incomplete Due to Inadequate Procedures. This involved one example of an inadequate SI.
- 16) LER 259/88-15: Failure to Monitor Off-Gas Stack Effluents Due to Procedural Inadequacy and Personnel Error. This included one example of an inadequate SI.
- 17) LER 259/88-35: Procedural Inadequacy Causes Unplanned Initiation of Control Room Emergency Ventilation. This involved two examples of inadequate SIs.
- 18) LER 259/89-14: Unplanned DG Starts, an ESF Actuation, Caused by Personnel Error and Procedural Inadequacy. This included one example of an inadequate SI.
- 19) LER 260/88-15: A Missed Chemistry Sample Due to Personnel Error Results in a Violation of Technical Specifications. This involved one example of the failure to maintain compensatory actions required by TS surveillance requirement 4.10.C.2.b when the fuel pool cleanup system was inoperable.

- 20) LER 260/89-21: Technical Specification Violation Caused By Personnel Error. This involved one example of failure to follow an SI.

b. TS LCO Compensatory Measures

- 1) VIO 89-11-01: Failure to Satisfy TS 3.2.A. This involved one example of failure to take compensatory measures required by TS LCO 3.2.A, Table 3.2.A, note 1.G for an inoperable ventilation exhaust radiation monitor. This event was reported in LER 259/89-06.
- 2) VIO 89-33-04: Breach of Fire-Rated Door. This involved one example of failure to implement compensatory measures required by TS LCO 3.11.G.1.a for inoperable fire rated assemblies.
- 3) VIO 89-43-04: Failure to Maintain TS Compensatory Measures for Inoperable Fire Hose Stations. This involved one example of failure to maintain compensatory measures required by TS LCO 3.11.E.1.a for inoperable fire hose stations (see paragraph 2.c of this report). This will be reported in a future LER.
- 4) LER 259/88-10: Inadequate Procedures Cause Two Cases of Missed Samples That Were Required to Compensate for Inoperable Effluent Radiation Monitors. This included one example of the failure to maintain compensatory measures required by TS LCO 3.2.D.2 for an inoperable RCW effluent radiation monitor. The other example involved an inadequate SI (see paragraph 6.a.14).
- 5) LER 259/88-15: Failure to Monitor Off-Gas Stack Effluents Due to Procedural Inadequacy and Personnel Error. This included one example of the failure to implement compensatory measures required by TS LCO 3.2.K.2 for inoperable off-gas stack radiation monitors. The other example involved an inadequate SI (see paragraph 6.a.16).
- 6) LER 259/88-16: Personnel Error Resulting in a Violation of Technical Specifications. This involved two examples of the failure to implement compensatory measures required by TS LCO 3.2.K.2 for an inoperable off-gas stack flow monitor.
- 7) LER 259/88-26: Violation of Fire Protection Technical Specification Due to Personnel Error. This involved four examples of failure to implement compensatory measures required by TS LCO 3.11.G for blocked open fire doors without operable fire detection systems on either side of the doors.
- 8) LER 259/88-41: Failure to Comply With Technical Specifications Caused by Personnel Error. This involved one example of the failure to implement compensatory measures required by TS LCO 3.2.D.2 for inoperable RCW effluent radiation monitors.



- 9) LER 259/88-46: Medical Emergency Causes Failure to Comply With Technical Specifications. This involved one example of failure to implement compensatory measures required by TS LCO 3.11.A.2 for inoperable fire protection panels and detectors.
- 10) LER 259/88-51: Failure to Meet Technical Specifications Because of Personnel Error. This involved one example of the failure to maintain compensatory measures required by TS LCO 3.2.D for inoperable RCW effluent radiation monitors.
- 11) LER 259/89-05: Plant Technical Specifications Surveillance Requirement Exceeded Due to a Misinterpretation by Supervision Responsible for Patrolling Firewatches. This involved one example of continuous failure to implement compensatory measures required by TS LCO 3.11.A.1.b for fire protected zones or areas with inoperable detectors.
- 12) LER 259/89-21: Failure to Establish Correct Fire Watch Due to Personnel Error Results in Condition Prohibited by Technical Specifications. This involved two examples of failure to implement compensatory measures required by TS 3.11.G for blocked open fire doors without operable fire detection systems on either side of the doors.
- 13) LER 296/88-06: Procedural Deficiency Caused Failure to Comply With Technical Specifications. This involved two examples of failure to maintain compensatory measures required by TS LCO 3.2.D.2 for inoperable RCW effluent radiation monitors.
- 14) LER 296/89-01: Failure to Provide Required Continuous Fire Watch on Inoperable Fire Doors Caused by Personnel Error Due to Insufficient Training. This involved two examples of the failure to implement compensatory measures required by TS LCO 3.11.G.1.a for blocked open fire doors without operable fire detection systems on either side.

In addition, the following events were associated with surveillance testing:

- VIO 88-28-01: Failure to Control and Correct Known Drawing Discrepancies. A known EECW drawing discrepancy resulted in the development of an inadequate SI for EECW hydrostatic testing. This error resulted in an event during which the 3C DG was operated without EECW flow for cooling during a performance of the monthly DG operability SI. This should have been identified during the SI upgrade review process. This event was reported in LER 296/88-07.
- VIO 89-20-01: Failure to Meet TS Requirements for Operable RHR Pumps. This violation involved a condition where the 2C RHR pump cooler fan motor was found to be rotating backwards. This condition made the associated RHR pump inoperable and reduced the number of



operable pumps below the minimum required by TS 3.5.B.9. This condition was not identified during the performance of the operability SI for the return to service of the 2C RHR pump cooler fan motor following maintenance activities. The condition was discovered during a subsequent, scheduled performance of the SI. This event would have been identified if the post maintenance test which consisted of the SI had been properly performed. This event was reported in LER 260/89-15.

The extent of violations and events listed above indicate that significant problems still exist in the area of surveillance testing. While the licensee has implemented numerous corrective actions, none have been effective in accomplishing the necessary program improvements. Of particular note is the NRC instrument adequacy inspection (IR 89-06) which was conducted in January and February, 1989. The results of this inspection included one violation involving 13 examples of deficiencies in the performance of SIs and calibration instructions, and a deviation (DEV 89-06-03) for the failure to fully implement the NPP commitment for a surveillance upgrade program. The report also questioned whether sufficient management attention had been directed to fully implement the NPP commitment. The basis for this conclusion included the examples referenced in the violation and similar findings from IR 88-35 (see paragraph 4 of this report).

The licensee responded to the findings of IR 89-06 by letter on July 7, 1989. The licensee admitted the violations and the deviation and committed to implement corrective actions to prevent their recurrence. These corrective actions included the following:

- Establishing an SI task force to review and to make recommendations on training, on the conduct of testing, procedure reviews, scheduling and personnel accountability.
- Revising procedures to establish a formal process to validate SIs, incorporate evaluation checklists, provide qualifications for reviewers and validators, and consolidate SI verification and validation requirements into one procedure.
- Providing training to operations and I & C personnel to prevent the reoccurrence of adverse activities.

The licensee concluded that these actions and increased management attention would ensure compliance with the intent of the commitments in NPP Volume 3. However, there were 12 examples of deficiencies related to SIs and TS LCO compensatory measures identified since completion of the SI observations for IR 89-06 (February 3, 1989), with 5 of those occurring after issuance of the licensee's response to the report. This does not include the three new examples in paragraphs 2.a, 2.b, and 2.c of this report, or the examples in paragraph 4 of this report which occurred prior to the IR 89-06 inspection.

7. Exit Interview (30703)

The inspection scope and findings were summarized on October 12, 1989, with those persons indicated in paragraph 1 above. The inspectors described the areas inspected and discussed in detail the inspection findings listed below. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspectors during this inspection. Dissenting comments were not received from the licensee.

<u>Item</u>	<u>Description</u>
259, 260, 296/89-43-01	Apparent Violation, Failure to Maintain the Minimum Number of DGs Operable Due to an Inadequate SI.
259, 260, 296/89-43-02	Unresolved Item, Adequacy of RHRSW Flow During O-SI-4.2.B-67.
259, 260, 296/89-43-03	Apparent Violation, Failure To Sample DG Fuel Oil Per TS Frequency.
259, 260, 296/89-43-04	Apparent Violation, Failure To Maintain TS LCO Compensatory Measures For Inoperable Fire Hose Stations.
260/89-43-05	Apparent Violation, Failure to Follow SIs and Inadequate SIs.

8. Acronyms

BFN	Browns Ferry Nuclear Plant
DEV	Deviation
DG	Diesel Generator
EECW	Emergency Equipment Cooling Water
ENS	Emergency Notification System
ESF	Engineered Safety Feature
FPP	Fire Protection Plan
FSAR	Final Safety Analysis Report
I&C	Instrumentation and Control
IR	Inspection Report
IRM	Intermediate Range Monitor
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LRED	Licensee Reportable Event Determination
NCV	Non Cited Violation
NIC	Non Intent Change
NPP	Nuclear Performance Plan
NRC	Nuclear Regulatory Commission
PMT	Post Maintenance Testing
RCA	Root Cause Analysis
RCW	Raw Cooling Water
RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water

RPS	Reactor Protection System
SDSP	Site Director Standard Practice
SI	Surveillance Instruction
SGTS	Standby Gas Treatment System
SIRUS	Surveillance Instruction Review for Unit Startup
TS	Technical Specifications
TVA	Tennessee Valley Authority
URI	Unresolved Item
VIO	Violation

