



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

Report Nos.: 50-259/89-47 50-260/89-47, and 50-296/89-47

Licensee: Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

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

Facility Name: Browns Ferry 1, 2, and 3

Inspection Conducted: September 25-29, 1989

Inspector: *[Signature]* 10/20/89
for C. A. Patterson, Team Leader Date Signed

Team Members:

W. Marini
D. Nelson

Approved by: *[Signature]* 10/20/89
W. S. Little, Section Chief Date Signed
Inspection Programs
TVA Projects Division

SUMMARY

Scope:

This special announced inspection of Technical Specification (TS) was conducted to review the disposition of a historical list of TS problems, TVA's task force audit of TS, a comparison of system design basis to TS surveillance requirements, and a comparison of TS to the plant configuration.

Results:

Disposition of a historical list of TS problems was nearly complete with most of the restart TS changes completed. Action taken to resolve these issues was good.

The disposition of the TS task force recommendations needed attention to resolve the restart TS issues in a timely manner. Review by the RRB using the Restart Criteria had not begun during the week of the inspection. Thirty-six items were awaiting PORC review. Since the licensee was still in the process

of resolving these issues, the inspection team could not confirm that all restart TS changes were identified. Review of the TS amendment concerning TS 3.7.F (item D61) indicate the quality of reviews could be improved, paragraph 3.

A violation with three examples concerning document control of a technical specification amendment and updating controlled copies of TS was identified. These examples resulted from inattention to detail and were not an indication of a programmatic problem. The examples are in paragraphs 2 and 4.

Two IFIs were identified: one related to RHR cross-tie operability (paragraph 5), and the other related to a failure to implement a TS Task Force recommendation in making a TS change (paragraph 3.a.).

REPORT DETAILS

1. Persons Contacted

Licensee Employees:

- O. Zeringue, Site Director
- G. Campbell, Plant Manager
- *R. Smith, Project Engineer
- J. Hutton, Operations Superintendent
- *A. Sorrell, Maintenance Superintendent
- G. Turner, Site Quality Assurance Manager
- *P. Carier, Site Licensing Manager
- *P. Salas, Acting Compliance Supervisor
- *J. Corey, Site Radiological Control Superintendent
- R. Tuttle, Site Security Manager

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

NRC Attendees

- *W. Little, Section Chief
- *D. Carpenter, Site Manager
- *C. Patterson, Restart Coordinator
- *E. Christnot, Resident Inspector
- *W. Bearden, Resident Inspector

*Attended exit interview

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

2. Historical List of TS Problems

During the period of time that BFNPP has been shut down, a number of items have been identified which necessitated revisions or upgrades to the TS. These items were identified in a variety of ways, including NRC Inspection Reports, LERs, Generic Letters, and 10 CFR 50, Appendix R. As a result of several meetings and conversations between licensee personnel and NRC staff, a list of 54 such items was compiled in March 1987. Of these, 31 were determined to require submittal and approval of the affected TS prior to restart of Unit 2. The team reviewed these 31 restart items and two nonrestart items to determine whether the affected TS had been revised and whether the revision adequately addressed the identified concern. Below is an item by item description identified by the item number from the March, 1987 list of TS revisions. Unless otherwise noted, the team's review found that the licensee's actions were appropriate and acceptable.



(Note: When a series of three amendment numbers is listed, they represent the applicable amendments for Unit 1, Unit 2, and Unit 3, respectively)

- ITEM 2) Amendment 134, 130, 105, (7-17-87) revised TS Table 3.1.A to delete the applicability of alternate action 1.B. from APRM high flux and inoperative trip functions. This alternate action could have erroneously allowed the reactor to be placed in an operational condition where trip functions were required to be operable, but were not.
- ITEM 3) Amendment 133, 129, 104 (5-13-87) revised TS LCO 3.3.B.3 to clarify RWM operability requirements.
- ITEM 5) Amendment 143, 139, 114 (2-12-88) revised TS LCOs 3.7.B.2.b, 3.7.E.2.b, and 3.7.F.2.b to revise the methodology and acceptance criteria for laboratory analysis to verify charcoal absorption efficiency for SBTG, CREV, and Primary Containment Purge systems, as the previous methodology was outdated.
- ITEM 6) Amendment 138, 134, 109 (9-11-87) revised TS 6.0 to update and clarify minimum plant staffing levels and onsite organization.
- ITEM 8a) Amendment 158, 154, 129 (11-18-88) revised Note #1 of TS Definition 1.0.M to allow the mode switch to be temporarily placed in any position in order to perform required tests or maintenance when the reactor is in the shutdown or refuel modes.
- ITEM 8b) Amendment 158, 154, 129 (11-18-88) revised TS Definitions 1.0.S and 1.0.M to link more directly with mode switch position and make them applicable only when there is fuel in the reactor vessel.
- ITEM 8c) Amendment 158, 154, 129 (11-18-88) revised TS Definition 1.0.J to more clearly define the term startup.
- ITEM 8d) Amendment 158, 154, 129 (11-18-88) revised TS Definition 1.0.K to clarify the term COLD SHUTDOWN CONDITION to include both shutdown and refuel modes.
- ITEM 9) Amendment 135, 131, 106 (8-20-87) revised TS Definition 1.0.C.2 to clarify its applicability during Cold Shutdown or Refueling. The team determined this clarification to be appropriate. However, an additional concern was identified. Although this revision was approved in 1987, page 1.0-2 currently located in controlled copies of the TS did not reflect the approved and issued change. Information provided by the licensee revealed that, at the time the change was approved, the correct wording was incorporated into the controlled copies



of the TS and had not been incorporated into the TS master copy. In February 1989, TS Amendment 158, 157, 129 revised different information contained on the same page. Upon approval, the new changes were made to the TS master copy and distributed to the controlled copies of the TS. This resulted in inadvertent use of outdated wording in TS Definition 1.0.C.2. This is considered a failure to maintain adequate control of changes to approved documents, as required by 10 CFR 50, Appendix B Criterion VI, Document Control, as committed to by NQAM Part I, Section 2.6, as implemented by SDSP 2.12, and is identified as example one of Violation 259, 260, 296/89-47-01, Document Control of TS.

- ITEM 10) This item involved confusing information in TS 3/4.5.C pertaining to the operability requirements for RHRSW pumps. The licensee had submitted proposed clarification of these requirements in TS-242, which is currently under review by NRC staff.
- ITEM 12) This item involved incorrect information regarding HPFPS stations 3.A, 3.B, and 3.C in TS Table 3.11.A. Amendment 162, 159, 133 (12-12-88) encompassed a general rewrite of TS 3/4.11 to eliminate ambiguity and bring BFNP into conformance with BWR STS and other current industry practices.
- ITEM 13) This item involved the discovery that, although TS 4.11.D required the Safety Engineer to perform a monthly inspection of plant fire protection systems, TS 6.0 did not provide for a Safety Engineer in the site organization. The administrative and technical changes referenced in items 6 and 12, above, provide adequate clarification of this requirement and responsibility.
- ITEM 14) This item involved the observation that TS 6.0 did not accurately describe the current onsite organization. The administrative changes referenced in item 6, above, adequately resolve this observation.
- ITEM 15) Amendment 127, 122, 98 (2-26-86) provided for the establishment of a procedure to limit the amount of overtime worked by personnel performing safety related functions, in accordance with GL 82-12.
- ITEM 17) Amendment 139, 135, 110 (1-25-88) revised TS 6.8.3.1 to clarify the access requirements to high radiation areas where the dose rate is greater than 100 mr/hr but less than or equal to 1000 mr/hr.
- ITEM 18) This item involved the evaluation of TS Table 3.7.A, Primary Containment Isolation Valves, for possible additions or corrections. The licensee had completed their review and submitted proposed changes via TS-251 (8-2-88) and TS-251,

supplement #1 (7-13-89). These proposed changes are currently under review by NRC staff.

- ITEM 22) Amendment 140, 136, 111 (1-19-88) revised TS Table 3.2.A to change the trip level setting for SBTG Relative Humidity Heaters to 2000 cfm to prevent damage to the SBTG filter banks.
- ITEM 27) Amendment 145, 141, 116 (2-29-88) revised TS Definition 1.0.0.3, TS 3.7.D.1, and TS 3.7.D.2 in order to make Primary Containment Integrity definition, operability requirements, and action statement consistent with each other.
- ITEM 31) Amendment 150, 146, 121 (7-5-88) revised TS SRs 4.7.E.1, 4.7.E.3, 4.7.F.1, 4.9.A.2.c, and 4.11.A.5 to replace the words "not to exceed" with the words "at least once every" in order to provide consistency with surveillance interval requirements contained in TS Definition 1.0.LL.
- ITEM 36) Amendment 155, 151, 126 (9-23-88) added HPCI and RCIC functions to TS Tables 3.2.B and 4.2.B and to the notes for TS Table 3.7.A to complete the lists of Groups 4 and 5 isolation functions.
- ITEM 37) Amendment 147, 143, 118 (3-3-88) provided several corrections as follows:
- Clarified Note 7.d for Table 3.2.C, pertaining to Rod Block Monitor operability
 - Revised TS 2.1.A.1.d to show SR 4.5.L as the correct SR for APRM Scram Setpoints
 - Deleted Note 14 from Table 4.2.A, as it is no longer applicable to any instruments in the table
 - Revised TS 3.6.H to show SI 4.6.H-1 and 4.6.H-2 as being the SIs that list safety related snubbers

One additional concern originally included within the scope of this item involved confusing notes pertaining to Primary Containment and Reactor Building Isolation Instrumentation. Note 11 of Table 3.2.A stated that an instrument channel may be placed in an inoperable status for up to four hours for required surveillance, while Note 22 of Table 4.2.A stated that certain RMS channels may be administratively bypassed for up to 24 hours for functional testing and calibration. The licensee did not feel a TS clarification change was desirable at this time, since an upcoming equipment modification to these RMS channels will



necessitate TS changes and the confusion concerning the notes can be resolved at that time. This concern was originally identified by NRC in IR 86-05 as IFI 86-05-07. Additional followup information regarding this IFI is contained in IR 89-19, which identified this as an issue requiring resolution prior to Unit 2 restart.

- ITEM 38) Amendment 137, 133, 108 (8-26-87) revised the drywell leakage monitoring requirements in TS 3.6.C.1.b, TS 4.6.C.1, and TS 3.6.C.2 to reflect the guidance contained in GL 84-11.
- ITEM 39) Unit 2 Amendment 164 (5-16-89) revised TS 3/4.1.B to add surveillance requirements and correct the overvoltage, undervoltage, and underfrequency trip settings for the RPS power monitoring system.
- ITEM 43) Amendment 141, 137, 112 (2-3-88) revised TS 4.7.A.2 and TS 4.7.A.4 to correct containment leak rate testing requirements and delete the option of performing a reduced pressure test, as such a test could yield nonconservative results.
- ITEM 44) Amendment 142, 138, 113 (2-12-88) revised TS 3.7.A.5 and SR 4.7.A.5.c to limit the use of air for pneumatic control inside containment, to reflect the guidance contained in GL 84-09.
- ITEM 45) Amendment 154, 150, 125 (9-2-88) revised TS 3/4.4 to meet SLC shutdown requirements for future fuel cycles, and to comply with ATWS requirements of 10 CFR 50.62.
- ITEM 46) Amendment 153, 149, 124 (8-19-88) revised TS 3/4.5, 3/4.9, and 6.9.7 to improve DG reliability by decreasing the number of fast diesel starts, to reflect the guidance contained in GL 84-15.
- ITEM 47) Unit 2 Amendment 162 (1-30-89) revised TS Tables 3.2.B and 4.2.B to change the trip setpoint for the existing ADS timer, and add surveillance and setpoint requirements for a high drywell bypass timer, in accordance with NUREG-0737, Item II.K.3.18.
- ITEM 48) This item involved a proposed TS change to demonstrate that ARI equipment can satisfy the reliability requirements of the ATWS Rule, 10 CFR 50.62. Conversations with licensee personnel and NRC staff determined that such a change is not required at this time. NRC staff will provide guidance on a generic basis regarding TS requirements for ARI at a future date.
- ITEM 50) Unit 2 Amendment 172 (9-13-89) updated the Unit 2 TS to reflect the Reactor Core Operating Limits for Cycle 6.



- ITEM 52) Amendment 152, 148, 123 (8-8-88) revised TS Table 3.7.A to increase the stroke time for LPCI injection valves FCV-74-53 and -67 from 30 seconds to 40 seconds due to valve motor operator modifications required to meet 10 CFR 50.49 criteria.
- ITEM 53) Amendment 160, 157, 131 (11-28-88) revised TS 1.1.C to delete all references to "top of active fuel" when measuring reactor water level, and to describe all involved setpoints as "above vessel zero".
- ITEM 54) This item involves proposed TS additions pertaining to testing requirements necessary to demonstrate remote shutdown capability, as required by 10 CFR 50, Appendix R. The licensee has submitted its proposed Appendix R TS enhancements via TS-268 (4-14-89). This submittal is currently under review by NRC staff.

3. TS Task Force Audit

To fulfill a commitment made in LER 260/89001, Fuel Load Without Adequate Neutron Monitoring Due to Inadequate Safety Review of Technical Specification Amendments, an assessment was conducted of the BFNP Unit 2 TS. The licensee established a TS assessment team consisting of ten members with nuclear work experience ranging from 8 to 27 years. The final report was issued March 31, 1989.

The team developed four major objectives to perform the assessment. A summary of the four objectives and the licensee's conclusion follows:

- Objective A was an evaluation of the effectiveness of the TS change control program. The task force concluded that the process was effective in identifying necessary changes to TS and implementing procedures.
- Objective B was to evaluate the current TS interpretations to determine their compatibility with the intent of TS requirements. The task force concluded that the TS interpretation manual contained four nonconservative interpretations and nine outdated interpretations. CAQRs were written to track resolution of these deficiencies.
- Objective C was to provide confidence that TS accurately reflected plant design basis criteria. The task force concluded that the TS consistently reflect plant design criteria. Of the 18 issues identified none were determined to be significant by the task force.
- Objective D was to provide confidence that TS contained essential requirements to ensure safe plant operation. The task force concluded that BFNP TS contained essential requirements, however, significant issues were identified which when resolved would enhance the ability to safely operate Unit 2. Of 99 issues identified, two

were recommended for Unit 2 restart TS changes. Eighty-three of the issues were recommended for restart administrative controls and evaluation. The remaining 14 issues were categorized as post-restart action items.

From the four objectives the 18 items in C and 99 items in D were placed into several categories of action items. Each item was designated by a letter and number as C1, C2, or the appropriate designation for the item.

After the TS task force performed the audit a group of BFNP plant personnel were assembled consisting of licensing engineers, system engineers, and operations personnel and others to answer the items and prepare the action item. The action in some cases was the preparation of procedure revision for submittal to PORC. Several more restart TS changes were identified by the plant group.

The inspector questioned whether the Restart Criteria in Volume 3 of the NPP were being used to evaluate whether an item was a restart TS change or post restart change. At the end of the inspection none of the items had been reviewed by the RRB. Additionally, the RRB review would come after a PORC review of some items. There were an estimated 35 items awaiting PORC approval. Included in this were 10 items designated as post restart TS changes.

The inspector concluded that the licensee was still in the decision making stage for determination of whether items were restart or not. This was also supported by the TS task force recommendation of 2 restart TS changes compared to a total of 6 after the plant staff review. Considerable variation of the numbers could result following PORC review and RRB review, with new items designated as post restart TS changes.

The inspector determined this portion of the inspection could not be a confirmatory one since the actions to address the task force items were still being reviewed. The inspection could only be somewhat of a quality check on the items in progress.

The inspector briefly reviewed the entire list of findings. In general, the inspector thought the task force items were well thought out and conservative reflecting the experience level of the task force.

Accordingly the inspector reviewed in detail a sampling of the items identified by the TS task force. The first two items (D8 and D61) were identified by the TS task force as restart items. A discussion of the inspection of these items and other items follows:

a. Audit Item D 61

The task force recommend a TS change prior to restart for TS 3.7.F, Primary Containment Purge Vent and Exhaust. The present TS states

that primary containment shall be normally vented and purged through the primary purge system. The SBTG may be used when the primary containment purge system is inoperable. The task force concern was that for normal venting, during power operating conditions the SBTG was the preferred path and the technical specification should be amended accordingly.

The inspector reviewed the BFNP TS submittal dated August 4, 1989, and concluded that the submittal did not address the task force concern. No statement was added to allow the preferred vent path. The second sentence of 3.7.F.1 concerning using SBTG when primary containment purge is inoperable was eliminated from the LCO statement. This part of the LCO statement was moved to the BASES. This represents a fundamental misunderstanding of LCO statements and TS BASES. 10 CFR 50.36 states the BASES are not part of TS.

The statement added to the BASES would have better described the operation of the purge system. The statement was that the primary containment purge and ventilation system may be used as part of the inerting/deinerting process for 24 hours following placing the mode switch in the RUN position or 24 hours prior to shutdown. This is the purpose of the purge system. During power operation, the primary containment is isolated by two isolation valves in series.

The licensee decided to revise the submittal. Inspector Follow-up Item 259, 260, 296/89-47-03 is designated to follow-up on this action.

b. Audit Item D8

The task force recommended a TS change prior to restart for TS 3.2.A-1.0, concerning isolation of shutdown cooling. BFNP TS action 1.0 in Tables 3.2.A notes that for inoperable isolation function that shutdown cooling should be isolated. The task force felt that shutdown cooling should be allowed to remain in service even if the automatic isolation capability becomes inoperable. Other compensating action could be acceptable and at a minimum a time should be allowed to establish alternate decay heat removal capability prior to isolation.

The inspector concurs with a TS change for establishing an alternate decay heat removal prior to isolation. In discussion with the licensee consideration was being given to allowing six hours. The inspector noted that STS requires the affected system isolation valves be closed and locked within one hour and declare the affected system inoperable. The one hour time period seemed adequate for establishing an alternate cooling method. Any deviation from STS regarding this matter should be fully explained in TVA's submittal.

The licensee stated the time difference would be reviewed.



c. Audit Item C8

The task force identified the RPS requirements of 3.1.A. do not require the IRM inoperative trip or the APRM inoperative trip while in shutdown. These functions should be required OPERABLE anytime the high flux trip is required. The table also does not require APRM high in shutdown, however, note 7 applied to the REFUEL heading seems to indicate it should be applicable. The task force recommended that controls be established prior to restart followed by TS changes.

The plant staff determined this item as acceptable and correct with no administrative controls needed or TS changes required. The basis for this was stated that the existing plant design and hardware interlocks make it impossible for any control rod to be at any position other than fully inserted when the mode switch is in shutdown. Note 7 applied to REFUEL only.

The inspector reviewed note 7 and the table. Note 7 was beside the column heading of the Table 3.1.A for REFUEL only. However, Note 7 states the following:

- When the reactor is subcritical and the reactor water temperature is less 212 degrees F, only the following trip functions need to be operable:
 - A. Mode switch in SHUTDOWN
 - B. Manual scram
 - C. High flux IRM
 - D. Scram discharge volume level
 - E. APRM 15 percent scram
 - F. Scram pilot air header low pressure

The inspector reviewed STS and found that the RPS trip functions were required for operating mode 5 which is both Shutdown or Refuel. Furthermore in BFNP TS Section 1.0 for definitions it was noted that definition M., Mode of Operation, for shutdown mode and refuel mode has a footnote (1). This footnote allows the mode switch to be placed in any position to perform required tests or maintenance authorized by the shift operations supervisor, provided that the control rods are verified to remain fully inserted by a second licensed operator or other technically qualified member of the unit technical staff.

Since the function of RPS is to protect the core, these trip functions might be applicable in the shutdown mode also. The inspector has concern with the task force finding and should be reviewed further prior to restart.



Also, the inspector was concerned that the plant staff did not evaluate the difference between STS from a standpoint that more protection might be needed for the reactor. The evaluation was only from the standpoint that the existing controls were justified.

The licensee stated this item would receive further review.

d. Audit Item D39

The task force identified that the value of "tau" which is a factor to account for scram response time in the calculation of the minimum critical power ratio should be administratively controlled as equal to one until scram time measurements and "tau" calculations are completed at the beginning of each cycle. TS 4.3.C requires scram time testing be completed prior to exceeding 40% power after each refueling outage. A TS change is to be submitted after restart.

TVA agreed to the administrative controls prior to restart and to keep the controls in effect until a TS a change was made.

BFNP TS 4.5.k.2.a requires "tau" equal to 0.0 prior to initial scram time measurements for the cycle. STS in surveillance requirement 4.2.3 states "tau" should be equal to 1.0. If BFNP implements the administrative controls, they will be in violation of BFNP T.S. The inspector concluded that as a conservative approach, and to be in compliance with TS, the value of "tau" should be changed.

The licensee agreed that to get "tau" equal to 1.0 would be a noncompliance item and that the surveillance requirement would remain at 0.0 until the TS was changed. Administrative controls would review a calculation using 1.0 until the TS was updated.

e. Comparison of BFNP to Standard TS

The licensee's audit included a comparison of BFN TS to STS for BWRs. Recognizing numerous minor differences, the licensee established an undefined level of significance for documenting differences. The inspector selected one system, SLC, and conducted an independent comparison between BFNP TS and STS in order to determine the depth of comparison conducted by the licensee. The following differences noted by the inspector were not documented by the licensee. Also, only differences where the BFN TS are less conservative than STS are identified:

- Pump Operability: Verified by BFN TS 4.4.A.1 quarterly vs STS 4.1.5.b.1 monthly.
- System Valve Lineup: Not verified by BFN /TS vs STS 4.1.5.b.4 monthly.

- Explosive Charge: Continuity not verified by BFN TS vs STS 4.1.5.b.2 monthly. Replacement required to be no older than 5 years by BFN TS 4.4.A.2.c vs STS 4.1.5.c.1 required to be from same manufactured batch as one tested.
- Infrequent Surveillances: Once per cycle, no operational condition specified by BFN TS vs STS 4.1.5.c once per 18 months, shutdown.

These difference were discussed with the licensee as observations and do not represent a concern about the quality of the task force audit which was good.

4. TS Comparison to Plant Configuration

a. TS Tables

The inspector compared selected TS tables of instrumentation and components to actual plant configuration. The tables selected were:

- 3.2.F Surveillance Instrumentation
- 3.7.A Primary Containment Isolation Valves
- 3.11.A Fire Detection Instrumentation
- 3.11.B Spray/Sprinkler Systems
- 3.11.C Hose Stations

Information contained in the tables was verified, on a sampling basis, to be consistent with actual plant configuration. Included was verification of nomenclature, location, function, and in the case of instrumentation, the parameter measured and type of indication and range. A typographical error was identified in Table 3.2.F, Surveillance Instrumentation. Drywell Temperature Indicator TI-64-52AB was listed with other instrumentation for Drywell Pressure. The licensee acknowledged this error and stated that it would be corrected in a future TS amendment. No safety significance is connected with this error.

Also in Table 3.2.F, The wide range Gaseous Effluent Radiation Monitor and Recorder was incorrectly identified as Instrument Number RR-90-322A. The correct identification is RM-90-306 and RR-90-360, respectively for the monitor and recorder. The licensee had previously identified this discrepancy and produced a copy of an

intended TS revision to correct the error. This is new instrumentation and is still in the process of being installed.

b. TS Comparison to FSAR

The inspector verified that all references to the FSAR contained in TS Section 5.0, Major Design Features, were consistent with the FSAR. No discrepancies were identified.

c. TS Controlled Copy Review

The inspector reviewed two copies of Unit 2 TS to ensure that all pages were present and were of the appropriate amendment. The two copies reviewed were numbers 52 and 40 assigned to the NRC Resident Inspector's office and the Unit 2 control room, respectively.

Pages 1.1/2.1-2 through 1.1/2.1-4 of copy 52 were of the incorrect amendment. The pages present were considered "Original", having an effective date of 3-19-87. According to the TS Effective Page Listing, these pages should have an Effective Revision Date of 3-3-88, reflecting Amendment No. 143. This indicates that these pages were not properly revised upon Issuance of Amendment No. 143. Numerous other pages also affected by Amendment 143 were properly revised. The presence of superseded pages in copy 52 represents example two of the violation 259, 260, 296/89-47-01, discussed in paragraph 2 above.

Two copies of pages 3.7/4.7-15 and 16 (front and back of one sheet) were present in TS copy 40 located in the Unit 2 control room. One of these pages (3.7/4.7-16) contained a licensee added annotation adjacent to paragraph 4.7.c.1.a, a surveillance requirement for secondary containment. The annotation referred to CM-88-64-2-007. This CM identifies a known in-leakage source from temporary air compressors that accounts for a portion of the allowable in-leakage of 12,000 cfm. Since two copies of page 3/7/4.7-16 were present, the CM would not have been identified if the non-annotated page had been used. SDSP 12.11, "Special Requirements and Compensatory Measures," requires that when TS are annotated with SRs on CMs, that the annotated pages replace the existing pages. This precludes duplicated pages, and thus eliminates the possibility of missing a CM or SR. The inspector verified that all other pages annotated with SRs or CMs (two existed) in the control room copy of Unit 2 TS were not duplicated. The inspector also verified that no other SRs or CMs existed that should be annotated in Unit 2 TS according to the requirements in SDSP 12.11. The presence of two conflicting pages in the Unit 2 copy of TS represents example three of Violation 259, 260, 296/89-47-01 discussed in paragraph 2. The inspector discussed with the licensee the practice of annotating official copies of TS with

non-NRC reviewed information, which presents the opportunity for unauthorized changes to TS.

5. System Design Basis Comparison to TS Surveillance Requirements

In order to verify that TS surveillance requirements accurately verify system operability, the inspector compared surveillance requirement flow rates for the RHR system to the design basis flow rate requirements. FSAR Table 6.4-1 lists minimum RHR pump flow of 10,800 gpm and 20,000 gpm for one and two pump operation, respectively, at 0 psid between the reactor and drywell for adequate ECCS response. TS surveillance 4.5.B.1 requires that each LPCI (RHR) pump deliver 9000 gpm at 125 psig and two pumps in the same loop deliver 12,000 gpm at 250 psig. The licensee provided calculations that demonstrated the surveillance requirement flow rates are conservative in verifying RHR operability with respect to design basis flow rate requirements.

RHR TS 3.5.B.11 requires that the RHR unit to unit cross connect capability be operable whenever irradiated fuel is in the reactor and when pressure is greater than atmospheric. When questioned about this requirement pertaining to Unit 2 restart, the licensee stated that the Unit 1 RHR cross connect would be utilized to meet the requirement. It is unclear what licensee intentions are regarding Unit 1 RHR operability for seismic, environmental qualification, and fire protection requirements. Additionally, the NRC has questions with regard to satisfying TS surveillance requirements for Unit 1 RHR and control room staffing for Unit 1 with Unit 1 RHR required for Unit 2 operation. These concerns will be tracked as IFI 259,260,296/89-47-02, Unit 1 RHR Cross-Tie Operability.

6. Exit Interview (30703)

The inspection scope and findings were summarized on September 29, 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, 296/89-47-01	VIO, Document Control of TS, example 1 in paragraph 2, and examples 2 and 3 in paragraph 4.
259, 260, 296/89-47-02	IFI, Unit 1 RHR Cross-Tie Operability, paragraph 5.
259, 260, 296/89-47-03	IFI, Failure of TS Change to implement SI Task Force Recommendation, paragraph 3.a.

7. Acronyms

ADS	Automatic Depressurization System
APRM	Average Power Range Monitor
ARI	Alternate Rod Insertion
ATWS	Anticipated Transient Without Scram
BFNP	Browns Ferry Nuclear Plant
BWR	Boiling Water Reactor
CAQR	Condition Adverse to Quality Report
CFM	Cubic Feet Per Minute
CFR	Code of Federal Regulations
CM	Compensatory Measure
CREV	Control Room Emergency Ventilation
DG	Diesel Generator
FSAR	Final Safety Analysis Report
GL	Generic Letter
GPM	Gallon Per Minute
HPCI	High Pressure Coolant Injection
HPFPS	High Pressure Fire Protection System
IFI	Inspector Followup Item
IR	Inspection Report
IRM	Intermediate Range Monitor
LER	Licensee Event Report
LCO	Limiting Condition for Operation
LPCI	Low Pressure Coolant Injection
MR/HR	Millirems Per Hour
NPP	Nuclear Performance Plan
NRC	Nuclear Regulatory Commission
NSRB	Nuclear Safety Review Board
PORC	Plant Operations Review Committee
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water
RMS	Radiation Monitoring System
RPS	Reactor Protection System
RRB	Restart Review Board
RWM	Rod Worth Minimizer
SGBT	Standby Gas Treatment System
SDSP	Site Directors Standard Practice
SI	Surveillance Instruction
SLC	Standby Liquid Control System
SR	Surveillance Requirements
SRs	Special Requirements
STS	Standard Technical Specification
TS	Technical Specification
TVA	Tennessee Valley Authority
VIO	Violation

