



Tennessee Valley Authority, Post Office Box 2,000, Decatur, Alabama 35609

O. J. "Ike" Zeringue
Vice President, Browns Ferry Operations

JUL 06 1992

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter Of)	Docket Nos. 50-259
Tennessee Valley Authority)	50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM AND EMPLOYEE CONCERNS

- References:
- 1) Letter from TVA to NRC, dated November 12, 1991, Units 1 and 3 Operational Readiness Program
 - 2) Letter from NRC to TVA, dated April 1, 1992, Return to Service of Browns Ferry Nuclear Plant, Units 1 and 3
 - 3) Letter from NRC to TVA, dated June 4, 1992, Summary of the May 29, 1992, Meeting with the Tennessee Valley Authority Regarding Operational Readiness Review for the Browns Ferry Nuclear Plant, Unit 3

In Reference 1, TVA provided the NRC Staff with a description of the Units 1 and 3 Operational Readiness Program. In Reference 2, NRC requested a meeting to discuss TVA's planned Operational Readiness Program and a list of issues identified by the Employee Concerns Program and Employee Concerns Special Program that would not be resolved prior to the restart of each unit. As documented in Reference 3, TVA met with the Staff on May 29, 1992, to discuss these issues.

140022

9207140296 920706
PDR ADOCK 05000259
P PDR

Handwritten:
A001 Add: NRR/PNAS/ILRB 11
Rgn 2 Herd TA 11
At End

U.S. Nuclear Regulatory Commission

JUL 06 1992

As discussed in that meeting, TVA committed to revise the Operational Readiness Program to include a review by an independent Operational Readiness Review Team. The enclosure to Reference 1 has been revised accordingly and superseded. The updated description of the Operational Readiness Program is included as Enclosure 1 to this letter.

Additionally, the list of Corrective Action Tracking Documents (CATDs) from the Employee Concerns Special Program that are not required to be closed prior to the restart of each unit is included as Enclosure 2 to this letter. While some of the listed CATDs may be closed prior to the restart of Units 1 and 3, their closure is not considered to be a restart prerequisite. Open employee concerns will continue to be processed in accordance with approved Concerns Resolution Staff procedures, which establish the priority of corrective actions based on the safety significance of the issue. This is consistent with the approach taken for Unit 2 restart.

A summary list of commitments contained in this letter is provided as Enclosure 3. If you have any questions, please contact R. R. Baron, Manager of Site Licensing, at (205) 729-7570.

Sincerely,



O. J. Zerlingue

Enclosure

cc (Enclosure):

NR Resident Inspector
Brown Ferry Nuclear Plant
Route 12, Box 637
Athena, Alabama 35611

Mr. Thierry M. Ross, Project Manager
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

Mr. B. A. Wilson, Project Chief
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM

INTRODUCTION

This enclosure provides an overview of the Unit 2 Operational Readiness Program, a discussion of lessons learned, a description of the differences between the Unit 2 and the Units 1 and 3 Operational Readiness Program, and an outline of the program to transfer Units 1 and 3 to Browns Ferry Operations.

OVERVIEW OF THE UNIT 2 OPERATIONAL READINESS PROGRAM

The purpose of the Unit 2 Operational Readiness Program was to provide TVA management with assurance that the required systems were operable, the organization was in place and personnel were able to conduct operations safely, and the activities, programs, and commitments required for Unit 2 restart were complete. This comprehensive effort was considered necessary because of the extended duration of the outage, changes in the site and support organizations, realignment of responsibilities, implementation of new programs to correct past problems, and the extensive plant upgrades implemented during the outage. This program was described by TVA in References 1 through 5. NRC review and approval of this program is documented in References 6 and 7. NRC inspections of Unit 2 readiness to operate are documented in References 8 through 14.

A tiered approach was used to evaluate the readiness of BFN Unit 2 to operate. The three primary elements were:

- A Senior Management Assessment of Restart Team (SMART) provided an overview of the restart preparations. This team consisted of TVA Vice Presidents within Nuclear Power. Their ultimate purpose was to provide a recommendation for plant restart to TVA's Senior Vice President, Nuclear Power.
- Independent reviews were performed by internal TVA Organizations, including an Operational Readiness Review performed at the direction of the Senior Vice President, Nuclear Power. Independent reviews by external organizations included the American Nuclear Insurers, Nuclear Mutual Limited, and the Institute for Nuclear Power Operations (INPO).
- A Browns Ferry Self Assessment for Operational Readiness Program was conducted. This site program verified the completion of restart commitments, addressed organization and program readiness using an INPO type self assessment, and ensured the implementation of a methodology for returning systems to service.

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 2 of 15

The overall layout of the Unit 2 Operational Readiness Program is shown below in Figure 1.

FIGURE 1
OVERVIEW OF UNIT 2 OPERATIONAL READINESS PROGRAM

SENIOR MANAGEMENT ASSESSMENT Or
RESTART TEAM (SMART) OVERVIEW

INDEPENDENT REVIEWS

- Nuclear Safety Review Board
- Quality Assurance
- Operational Readiness Review Team
- Nuclear Insurers
- Institute for Nuclear Power Operations

SELF ASSESSMENTS FOR OPERATIONAL READINESS

- OPERATIONAL READINESS PROGRAM
 - Implementation of Browns Ferry Nuclear Performance Plan (BFNPP) Commitments
 - An Evaluation of Performance Objectives
 - Verification of Restart Prerequisites
- "WALKING YOUR SPACES" PROGRAM
- FOCUSED SELF-ASSESSMENTS

A summary of each of the reviews follows.

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 3 of 15

SENIOR MANAGEMENT ASSESSMENT OF RESTART TEAM (SMART) OVERVIEW

The objective of SMART was to ensure that appropriate standards of excellence were achieved for the restart of BFN Unit 2. The SMART overview of startup preparations included a combination of reports from responsible management, results from independent reviews, and personal observations. In their overview, SMART used the following six acceptance bases to assess the plant's readiness for restart:

- Commitments made to NRC that were tied to restart were resolved.
- Work required to establish operability of systems required for restart was complete.
- The self-assessment program was established and effectively implemented.
- Independent review results were evaluated and restart related corrective actions were verified as completed and longer term actions scheduled.
- Pertinent performance indicators were established and performance trends were satisfactory for restart.
- A power ascension program, including NRC hold points, was established.

INDEPENDENT REVIEW

Independent reviews were performed by internal TVA Organizations, including a special Operational Readiness Review performed at the direction of the Senior Vice President, Nuclear Power. Independent reviews by external organizations included the American Nuclear Insurers, Nuclear Mutual Limited, and INPO. These independent reviews provided a measure of the effectiveness of the working level self-assessments as well as an external evaluation of the general status of the recovery effort. Summarized below are examples of independent reviews which provide readiness information to line management and to SMART.

NUCLEAR SAFETY REVIEW BOARD (NSRB)

The NSRB is TVA's offsite safety review board. The NSRB assessed the status of preparations for restart of BFN Unit 2 from a safety oversight perspective. This review included an overall assessment of the restart plan for BFN Unit 2, the restart test program, and issues from past NSRB meetings. NSRB provided recommendations to assist the Senior Vice President, Nuclear Power, in his decision to approve restart.

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 4 of 15

QUALITY ASSURANCE (QA)

Site QA and QA audit organizations performed numerous independent reviews of programs and actions related to the restart of BFN Unit 2. Examples of these reviews are provided below:

- Independent verification of the closure of restart commitments identified in the Browns Ferry Nuclear Performance Plan (BFNPP).
- An operational readiness assessment based on a Safety System Functional Inspection.
- Monitored the Design Baseline and Verification Program.
- The annual QA assessment provided a comprehensive review of the effectiveness of BFN's implementation of the QA program.

OPERATIONAL READINESS REVIEW TEAM

The Senior Vice President, Nuclear Power established an independent review team to assess the overall restart readiness of BFN Unit 2. The team consisted of both senior level TVA managers and equivalent level experienced personnel from outside nuclear organizations. This assessment was conducted in three phases and primarily focussed on the readiness of the operating and support organizations to perform restart testing, start-up, operations, and maintenance. Three reports were issued and the concerns raised in these reports were resolved.

NUCLEAR INSURERS

The American Nuclear Insurers performed several inspections of plant operations during the recovery period. Nuclear Mutual Limited performed their standard inspections. Results and recommendations from these inspections were used to gauge progress and were evaluated by SMART in determining restart readiness.

INSTITUTE FOR NUCLEAR POWER OPERATIONS

During 1988 and 1989, INPO made five assist visits to Browns Ferry and evaluated maintenance, work control, and human performance. INPO annual evaluations were conducted in April 1988 and 1989 and covered all major functional areas. The findings and recommendations from those evaluations and visits were used to improve operations and processes and also provided performance based comparisons of the effectiveness of the recovery initiatives.

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 5 of 15

SELF-ASSESSMENTS FOR OPERATIONAL READINESS

The self assessments for operational readiness consisted of three elements: the site managed BFN Operational Readiness Program, the "Walking Your Spaces" Program, and focused self-assessments. A summary of each of these reviews is provided below:

OPERATIONAL READINESS PROGRAM

The site managed self assessments for operational readiness of Unit 2 addressed the following three primary program elements:

- Implementation of the Browns Ferry Nuclear Performance Plan commitments
- An evaluation of performance objectives for principal organizations
- Verification of restart prerequisites

A summary of each of these reviews is provided as follows:

Browns Ferry Nuclear Performance Plan Implementation

The first element of the site managed Operational Readiness Program ensured that the BFNPP restart commitments were resolved prior to restart. This program ensured that major restart commitments, such as Appendix R and Environmental Qualification, were completed.

Performance Objectives Evaluation

The second element of the site managed Operational Readiness Program involved the establishment and assessment of performance objectives. The purpose of the performance objective evaluation was to ensure that line organizations functioned effectively and were prepared for plant restart and operations. This effort was considered necessary because of the extended duration of the outage, changes in the plant organizations, realignment of responsibilities, implementation of new programs to correct past problems, and the extensive plant upgrades implemented during the outage. The performance objectives evaluation was an assessment of station personnel, programs, practices, and management effectiveness using industry standards of excellence as guidance for comparison to actual plant practices. This site conducted activity in a manner similar to an INPO evaluation.

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 6 of 15

Restart Prerequisites Verification

The third element of the BFN Operational Readiness Program involved the development and verification of checklists to ensure that equipment status supported restart. The purpose of these checklists was to provide a systematic method to ensure that open work and outstanding programmatic items affecting system operability were dispositioned prior to declaring a system operable. The checklists addressed the following areas:

- Maintenance / work request backlog
- Outstanding hold orders
- Modification status
- Temporary alterations
- Surveillance status
- Preventative maintenance status
- Instrument maintenance status
- Chemistry control
- Restart testing
- Outstanding equipment problems
- Drawing adequacy
- Procedure adequacy
- Design basis

"WALKING YOUR SPACES" PROGRAM

The "Walking Your Spaces" program was a one-time, limited duration program focused on increasing management awareness of field activities and presence in the field. Corrections were made on the spot or documented for later attention as necessary. Each manager reported either verbally or in writing the significant results of his walking spaces to his immediate supervisor. This was a one-time, limited duration program which was concluded prior to the restart of Unit 2.

FOCUSED SELF-ASSESSMENTS

Several focused self-assessments were conducted in the early stages of the recovery effort to provide in-depth reviews of plant functional areas. The purpose of these assessments was to compare actual plant performance to site performance objectives and other performance criteria based on established standards of excellence (e.g., INPO, ANI, etc.). The following subjects were selected for the focused self-assessments:

- Maintenance
- Radiological Control
- Operations
- Technical Support (System Engineering)
- Chemistry

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 7 of 15

LESSONS LEARNED

SENIOR MANAGEMENT ASSESSMENT OF RESTART TEAM (SMART) OVERVIEW

The SMART provided valuable oversight and shared the combined experience of senior Nuclear Power managers. The SMART review will be repeated as part of the return to service of BFN Units 1 and 3.

INDEPENDENT REVIEWS

The independent external reviews and QA audits and oversight provided objective and constructive guidance from unconstrained viewpoints. The normal periodic reviews by INPO, the American Nuclear Insurers, and Nuclear Mutual Limited will be included in the Operational Readiness Program for Units 1 and 3. The QA function for Units 1 and 3 has been augmented by technical audits of the contractors; these reviews will be included in the Units 1 and 3 Operational Readiness Program.

As discussed with the NRC Staff on May 29, 1992, an independent Operational Readiness Review Team (ORRT) will evaluate programs and management systems directed towards multi-unit operation. It will be conducted as a single phase review with additional phases scheduled, as required. This evaluation will be based on lessons learned from the Unit 2 Operational Readiness Review and current plant operating experience. It will include such items as staffing of key organizations, support of multi-unit operation (e.g., prioritization of work orders, coordination of LCO's, who has authority to make decisions on shift), implementation of the System Preoperability Checklist (SPOC) and System Plant Acceptance Evaluation (SPAE) programs (discussed below), and Unit 1 separation. The staffing of the Units 1 and 3 ORRT has not been finalized. However, consideration is being given to personnel from INPO, TVA's corporate office, the NSRB, and contractors. Recommendations from the ORRT will be forwarded to SMART for review.

SELF-ASSESSMENTS FOR OPERATIONAL READINESS

The BFN Unit 2 Operational Readiness Program used a checklist approach to ensure that equipment status supported restart. These checklists provided a systematic method to ensure that open work, outstanding programmatic items affecting system operability, and required system testing and open items were dispositioned prior to declaring a system operable. Detailed descriptions of the SPOC and SPAE checklists are contained in References 15 through 17. Items included in the SPAE checklist (such as drawing updates, closure of unverified assumptions used in engineering calculations, etc.) were, in many cases, dispositioned just prior to the return of a system to service.

ENCLOSURE 1

Page 8 of 15

BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

The ability to define the scope of work required to return Units 1 and 3 to service early in the outage recovery process allows Units 1 and 3 to coordinate this work in a more systematic method. Closure of items will be more closely tied to completion of the associated programs. Therefore, Units 1 and 3 SPAE processes will utilize enhanced checklists which reflect the incorporation of many of the detailed checklists into the closure processes of the individual programs.

The Unit 2 performance objective evaluation ensured that line organizations function effectively and were prepared for plant restart and operations. The successful restart and continued operation of Unit 2 demonstrate the successful completion of this objective. Since Units 1 and 3 will be returned to service by the same organization responsible for the restart and operations of Unit 2, a separate re-evaluation of the operations organization and its programs and procedures is not necessary. However, an evaluation of such items as staffing of key organizations, support of multi-unit operation, Unit 1 separation, and the increased staffing requirements caused by the return to service of additional unit(s) will be included as part of the Evaluation of the Unique Aspects of Multi-unit Operation.

The focused self-assessments performed by site organizations prior to the restart of BFN Unit 2 provided in-depth reviews of plant functional areas as well as evaluations of identified problems. The purpose of these assessments was to compare actual plant performance to site performance objectives and other performance criteria based on established standards of excellence. The Browns Ferry Operations organization continues to monitor performance trends during Unit 2 operations and will continue to monitor performance as Units 1 and 3 are turned over and returned to service. Additional focused self-assessments as part of the Units 1 and 3 operational readiness program is not required.

The "Walking Your Spaces" program was a one-time, limited duration program focused on increasing management awareness of field activities and presence in the field. This program was concluded prior to the restart of Unit 2. As such, Units 1 and 3 do not require a formalized "Walking Your Spaces" program.

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 8 of 15

DIFFERENCES BETWEEN THE UNIT 2 PRECEDENT AND THE UNITS 1 AND 3 PROGRAM

TVA's overall commitment to use independent and self assessment programs, in order to achieve and maintain excellence, remains unchanged. The Units 1 and 3 Operational Readiness Program is being enhanced to take advantage of the lessons learned from the restart of Unit 2 and to address the unique aspects of the return to service of Units 1 and 3. One purpose of the Unit 2 Operational Readiness Program was to evaluate personnel performance and standards. Adequate levels of personnel performance have been established and continue to be monitored. Appropriate standards are in place. The restart of Unit 2 and its continued safe operation demonstrates that this objective has been met. The focus of the Units 1 and 3 Restart Organization and its Operational Readiness Program is in readying the individual units for restart, as opposed to operational management activities. A comparison between the Unit 2 and the Units 1 and 3 Operational Readiness Programs is shown below in Figure 2.

FIGURE 2
COMPARISON BETWEEN THE UNIT 2 AND UNITS 1 AND 3
OPERATIONAL READINESS PROGRAMS

UNIT 2 OPERATIONAL READINESS PROGRAM	UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
SENIOR MANAGEMENT ASSESSMENT OF RESTART TEAM (SMART) OVERVIEW	SENIOR MANAGEMENT ASSESSMENT OF RESTART TEAM (SMART) OVERVIEW
<p align="center">INDEPENDENT REVIEWS</p> <ul style="list-style-type: none"> ● Nuclear Safety Review Board ● Quality Assurance ● Operational Readiness Review Team ● Nuclear Insurers ● Institute for Nuclear Power Operations 	<p align="center">INDEPENDENT REVIEWS</p> <ul style="list-style-type: none"> ● Nuclear Safety Review Board ● Quality Assurance ● Operational Readiness Review Team ● Nuclear Insurers ● Institute for Nuclear Power Operations
<p align="center">SELF ASSESSMENTS FOR OPERATIONAL READINESS</p> <ul style="list-style-type: none"> ● OPERATIONAL READINESS PROGRAM <ul style="list-style-type: none"> ○ Implementation of the Browns Ferry Nuclear Performance Plan (BFNPP) ○ An Evaluation of Performance Objectives ○ Verification of Restart Prerequisites ● "WALKING YOUR SPACES" PROGRAM ● FOCUSED SELF-ASSESSMENTS 	<p align="center">SELF ASSESSMENTS FOR OPERATIONAL READINESS</p> <ul style="list-style-type: none"> ● OPERATIONAL READINESS PROGRAM <ul style="list-style-type: none"> ○ Implementation of the Special Programs ○ Evaluation of the Unique Aspects of Multi-unit Operation ○ Verification of Restart Prerequisites

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 11 of 15

SENIOR MANAGEMENT ASSESSMENT OF RESTART TEAM OVERVIEW OF UNITS 1 AND 3

The SMART review will be repeated as part of the return to service of BFN Units 1 and 3. The direction, seniority of membership, and objective of the SMART overview of Units 1 and 3 will remain unchanged.

INDEPENDENT REVIEW OF UNITS 1 AND 3

Input from the independent reviews of Units 1 and 3 will continue to be used in order to provide a measurement of the effectiveness of the working level self-assessments. The normal independent reviews by INPO, American Nuclear Insurers, Nuclear Mutual Limited, NSRB, and QA will be utilized to assess readiness for restart. The independent Operational Readiness Review Team will evaluate programs and management systems directed towards multi-unit operation.

SELF-ASSESSMENTS FOR OPERATIONAL READINESS OF UNITS 1 AND 3

The self assessments for operational readiness of Units 1 and 3 will consist of a site managed Operational Readiness Program. This program will focus on the implementation of the special programs, the additional resources required for operation of the additional unit, and completion of restart prerequisites. As discussed in the Lessons Learned section, a special "Walking Your Spaces" Program and focused self-assessments are not required for the Units 1 and 3 Operational Readiness Program. A summary of the changes between the Unit 2 Self-Assessment for Operational Readiness program and the Units 1 and 3 program is provided as follows:

Implementation of the Special Programs

As stated in Reference 18, TVA considers the submittal and subsequent revisions to the Corporate Nuclear Performance Plan and the BFNPP collectively satisfied the requirements of the NRC's September 17, 1985 request for BFN pursuant to 10 CFR 50.54(f). References 18 and 19 document the completion of the BFNPP corrective actions for Unit 2 restart. Therefore, TVA considers the BFNPP applicable only to Unit 2. The program elements associated with the implementation of the BFNPP for Unit 2 will be replaced with an assessment of the special programs for Units 1 and 3. The applicability of these special programs to the restart of Units 1 and 3 was detailed in Reference 20 and subsequent program specific submittals. The completion of the commitments contained in the BFNPP was verified by Site Licensing and independently reviewed by QA prior to the restart of Unit 2. The completion of the special programs on Units 1 and 3 will be verified by Restart Licensing and independently reviewed on a case-by-case basis as determined by Restart Licensing.

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 12 of 15

Evaluation of the Unique Aspects of Multi-unit Operation

The purpose of the Unit 2 performance objective evaluation was to ensure that line organizations function effectively and were prepared for plant restart and operations. The performance objectives evaluation was an assessment of station personnel, programs, practices, and management effectiveness using industry standards of excellence as guidance for comparison to actual plant practices. The evaluation of Units 1 and 3 will focus on the staffing, experience, qualifications and training of the additional Browns Ferry Operations personnel required to support the return to service, operations, and maintenance of the additional units. It will also include prioritization of work orders, coordination of LCO's, who has authority to make decisions on shift), implementation of the SPOC and SPAE programs, and Unit 1 separation.

Verification of Restart Prerequisites

The BFN Unit 2 Operational Readiness Program involved the development and verification of checklists to ensure that equipment status supported restart and that start-up commitments and programs were completed. The ability to define the scope of work required to return Units 1 and 3 to service early in the outage recovery process allows Units 1 and 3 to coordinate this work in a more systematic method. This enhancement to the restart process allows BFN to implement improvements to the restart prerequisites verification process. Completion of items such as drawing updates, closure of unverified assumptions used in engineering calculations, maintenance requests, etc., will be more closely tied to completion of the associated programs. Therefore, the checklists associated with the return to service of Units 1 and 3 systems will not require the same level of detail associated with the Unit 2 SPAE processes.

CONCLUSION

TVA's overall commitment to use independent and self assessments programs, in order to achieve and maintain excellence, remains unchanged. The overall Units 1 and 3 Operational Readiness Program will proceed in a manner similar to the Unit 2 precedent. The Units 1 and 3 Operational Readiness Program will result in the same level of assurance as the unit 2 program. The differences between the units 1 and 3 program and the unit 2 precedent were designed to incorporate lessons learned from the BFN Unit 2 experience and to address the unit interactions and differences introduced by the return to service of BFN Units 1 and 3.

BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

NRC's Safety Evaluation of the Unit 2 Operational Readiness Program is documented in References 6 and 7. However, the majority of the evaluations of BFN's operational readiness were documented in NRC Inspection Reports. In particular, the NRC conducted two Operational Readiness Assessment Team (ORAT) inspections just before the restart of Unit 2. TVA expects the regulatory framework for the assessment Units 1 and 3 operational readiness to be similar to the Unit 2 precedent. Therefore, TVA does not consider a specific SER necessary to document the acceptability of the minor differences between the Unit 2 and the Units 1 and 3 Operational Readiness Programs.

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 14 of 15

References:

Description of the Browns Ferry Unit 2 Operational Readiness Program

- 1) TVA letter, dated August 28, 1986, Browns Ferry Nuclear Performance Plan
- 2) TVA letter, dated July 1, 1987, Revision 1 to the Browns Ferry Nuclear Performance Plan
- 3) TVA letter, dated August 24, 1988, Management Self Assessment (MSA) of Readiness for Restart
- 4) TVA letter, dated October 24, 1988, Revision 2 to the Browns Ferry Nuclear Performance Plan
- 5) TVA letter, dated December 23, 1988, Operational Readiness (OR) Program

NRC Safety Evaluations

- 6) NRC letter, dated October 24, 1989, Supplement 1 to the Safety Evaluation Report of the Browns Ferry Nuclear Performance Plan - NUREG-1232, Volume 3
- 7) NRC letter, dated January 23, 1991, NUREG-1232, Volume 3, Supplement 2, Browns Ferry, Unit 2

NRC Inspection Reports

- 8) NRC letter, dated May 23, 1986, Report Nos. 50-259/86-14, 50-260/86-14 and 50-296/86-14
- 9) NRC letter, dated January 12, 1987, Report Nos. 50-259/86-32, 50-260/86-32 and 50-296/86-32
- 10) NRC letter, dated August 5, 1987, Report Nos. 50-259/87-26, 50-260/87-26 and 50-296/87-26
- 11) NRC letter, dated April 10, 1989, Report Nos. 50-259/88-36, 50-260/88-36 and 50-296/88-36
- 12) NRC letter, dated February 1, 1990, Report Nos. 50-259/89-60, 50-260/89-60 and 50-296/89-60
- 13) NRC letter, dated April 12, 1991, NRC Inspection Report 50-260/91-201 Browns Ferry Unit 2 Operational Readiness Assessment Team Inspection

ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1 AND 3 OPERATIONAL READINESS PROGRAM
(CONTINUED)

Page 15 of 15

- 14) NRC letter, dated May 30, 1991, NRC Inspection Report 50-260/91-202 Browns Ferry Unit 2 Operational Readiness Assessment Team Followup Inspection

Unit 2 Prerequisites

- 15) TVA letter, dated July 6, 1988, Prerequisites for Fuel Reload
- 16) TVA letter, dated October 21, 1988, Prerequisites for Reloading Fuel in BFN Unit 2
- 17) TVA letter, dated December 29, 1988, System Status Control

Other Correspondence

- 18) TVA letter, dated April 16, 1991, Completion Status of Corrective Actions Identified for Unit 2 Restart in Browns Ferry Nuclear Performance Plan (BFNPP)
- 19) TVA letter, dated May 14, 1991, Notification of Completion of Corrective Actions Identified for Unit 2 Restart in Browns Ferry Nuclear Performance Plan (BFNPP)
- 20) TVA letter, dated July 10, 1991, Regulatory Framework for the Restart of Units 1 and 3

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS

I-84-33-BFN-01 PREPARE AND CHECK THE ISOMETRIC AND SUPPORT LOAD DRAWINGS FOR EECW AND REACTOR DRAIN AND VENT SYSTEMS. ISSUE THESE DRAWINGS. PERFORM AN EVALUATION OF PROBLEM N1-110-1R. PROVIDE VERIFICATION DOCUMENTATION SUITABLE FOR AUDIT.

I 34-33-BFN-02 BFN-DNE HAS NOT PROVIDED VERIFICATION DOCUMENTATION FOR THE FOLLOWING: THAT ONE ENGINEERS HAVE BEEN MADE AWARE OF THE FACT THAT STRESS ALLOWABLES ARE NOT TO BE EXCEEDED, THAT THE EXAMPLES OF EXCESS STRESSES GIVEN IN THIS REPORT.

R-81-02-BFN-01 NSRS REPORT R-81-BFN-01 DEVELOP A TVA POLICY REGARDING LOSS OF SAFETY FUNCTION. IMPROPER INSTALLATION OF PIPING SUPPORTS IN THE RESIDUAL HEAT REMOVAL (RHR) AND EMERGENCY EQUIPMENT COOLING WATER (EECW) PIPE TUNNELS AT BFN RESULTED IN THE POTENTIAL FOR DEGRADATION OF SAFETY SYSTEMS CAPABILITIES DURING EARTHQUAKE LOADING. CONDITIONS ALLOWED BY BFN TECH SPEC 3.5.C ARE IN ERROR. WATTS BAR SHOULD REVIEW THIS ISSUE TO DETERMINE IF THIS ISSUE IS APPLICABLE TO WBN.

R-85-07-NPS-01 NSRS REPORT R-85-07-NPS-01 MANAGER OF POWER AND ENGINEERING APPOINTMENT OF A RECORDS MANAGER. A MANAGER SHOULD BE APPOINTED TO ENSURE THAT RECORDS OF QEB SOURCE INSPECTED EQUIPMENT AND MATERIALS ARE INDEXED AND STORED. THE SCOPE SHOULD INCLUDE ALL PAST AND FUTURE QEB SOURCE INSPECTED PROCUREMENT RECORDS FOR SQN, WBN, AND BLN.

SWEC-BFN-05-01 BY ORIGINAL DESIGN A LOSS OF OFFSITE POWER WOULD HAVE PREVENTED DIESEL GENERATOR PARALLELING. THE DESIGN ERRONEOUSLY ASSUMED THIS SIGNAL COULD BE RESET AFTER 10 MINUTES. WITH PARALLELING CAPABILITY INHIBITED, FSAR SAFETY DESIGN BASIS COULD NOT BE MET.

SWEC-BFN-05-04 A FIRE RECOVERY PLAN COMMITMENT TO SEPARATE ADS AUTOMATIC AND MANUAL RELIEF CABLES WAS NEVER ADEQUATELY MET SUBSEQUENT MODIFICATIONS MADE THE PROBLEM WORSE.

SWEC-BFN-07-01 DRAWINGS FOR SEVERAL SYSTEMS WHICH CONNECT TO SAFETY SYSTEMS DO NOT REFLECT IN-PLANT CONFIGURATION.

SWEC-BFN-09-01 THE LEVEL BETWEEN THE TORUS LEVEL DETECTORS SOMETIMES WAS GREATER THAN THE MAXIMUM ALLOWED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 2 of 17

- SWEC-BFN-17-02 IN JANUARY 1984 HPCI RESTRAINT R-24 WAS DISCOVERED FAILED. IN MARCH 1984 HPCI RESTRAINT R-23 WAS DISCOVERED FAILED. BOTH RESTRAINTS WERE IN THE UNIT 2 HPCI DISCHARGE PIPING. NO STRESS ANALYSIS WAS SUBSEQUENTLY PERFORMED ON THIS SECTION OF HPCI PIPING TO ENSURE PIPING INTEGRITY.
- SWEC-BFN-26-01 THE UNIT 3 HPCI STEAM ISOLATION VALVE (FCY-3-73-16) WAS FOUND MISSING A DRIVEN RETAINER GEAR RING. THE PROBLEM WAS IDENTIFIED BY TVA AFTER REASSEMBLY OF THE VALVE FOLLOWING THE PINION GEAR INSPECTION.
- SWEC-BFN-36-01 DESIGN CRITERIA NO. BFN-50-D707 REV. 2 ANALYSIS OF AS-BUILT PIPING SYSTEMS, WAS PARTIALLY REVIEWED BY THE NRC INSPECTOR WITH RESPECT TO PIPE SUPPORT DESIGN REQUIREMENTS. IT WAS NOTED THAT THE FREQUENCY/DEFLECTION CRITERIA FOR THE PIPE SUPPORT DESIGN WERE NOT ADDRESSED IN THE DOCUMENT.
- SWEC-BFN-38-02 A DESIGN ERROR WAS DISCOVERED IN THE ELECTRICAL CIRCUIT FOR TWO HAND SWITCHES (63-24 & 63-25) WHICH ALLOWED BY-PASSING THE INTERLOCK FOR DRYWELL PURGING IN THE "RUN" MODE OF OPERATION.
- SWEC-BFN-40-01 UNITS 1, 2, AND 3 DIESEL GENERATOR BATTERY RACKS WERE NOT SEISMICALLY MOUNTED AS REQUIRED BY TVA.
- SWEC-BFN-44-04 FAILURE TO DO SAFETY EVALUATION ON HPCI.
- SWEC-BFN-44-05 REACTOR BUILDING FLOOD LEVEL SWITCHES NOT SEISMICALLY QUALIFIED.
- SWEC-BFN-46-01 INADEQUATE DESIGN CONTROLS FOR SAFETY RELATED CALCULATIONS FOR SAFETY-RELATED CABLE TRAY SYSTEMS IN THE CONTROL BAY AREA, DIESEL GENERATOR BUILDING AND FOUND THEM TO BE IMPROPERLY DESIGNED. CABLE TRAY SUPPORT DESIGN CALCULATION IN THE REACTOR BUILDING SHOWED A LACK OF THOROUGHNESS, CLARITY, CONSISTENCY AND ACCURACY.
- SWEC-BFN-46-02 THE NRC REVIEWED THE CALCULATIONS FOR THE SAFETY RELATED CABLE TRAY SUPPORTS SYSTEMS. THE INSPECTOR IDENTIFIED EXAMPLES WHICH INDICATED THAT CALCULATIONS HAD EITHER NOT BEEN CHECKED OR IN SOME CASES NOT SIGNED BY THE DESIGNER. THEREFORE, THE REPORT STATES THAT DESIGN VERIFICATION HAD NOT BEEN IMPLEMENTED IN AN ACCEPTABLE MANNER.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 3 of 17

SWEC-BFN-46-04 NRC INSPECTION REPORT 85-41 REFERS TO A JUNE 1985 IN-DEPTH STUDY INTO CABLE TRAY/LOADING PROBLEMS CONDUCTED BY TVA WHICH CONCLUDED THAT THE INSPECTED CABLE TRAYS COULD NOT BE SEISMICALLY QUALIFIED FOR EITHER INTERIM OR LONG TERM OPERATION WITHOUT ADDITIONAL INSPECTION AND EVALUATIONS.

SWEC-BFN-48-04 A TVA REPORT DATED JULY 27, 1986 NOTED PROBLEMS WITH CLOSED OUT WORK PLANS. AN NRC SURVEY OF 64 WORK PLANS FOUND THAT AN ESTIMATED 50 PERCENT CONTAINED DRAWING DISCREPANCIES.

SWEC-BFN-49-01 TVA HAD REPORTED TO NRC ON AREAS WHERE LEAK RATE TEST IS NOT IN STRICT COMPLIANCE WITH 10 CFR 50, APPENDIX J. THESE AREAS CONCERNED: VALVES TESTED IN THE WRONG DIRECTION, VALVES TESTED USING THE WRONG MEDIUM, AND VALVES WHICH WERE NOT ROUTINELY TESTED BECAUSE THEY WERE PREVIOUSLY IDENTIFIED AS ISOLATION VALVES BUT ALSO FUNCTIONED AS CONTAINMENT ISOLATION VALVES. CORRECTIVE ACTIONS ARE BEING RACKED UNDER NCO 85-0171-001, 002, 003, 004 AND NCO 85-029-001, 002, 003, 005, 006.

SWEC-BFN-51-01 COMPLETE CORRECTIVE ACTION TAKEN TO CLOSE OUT NRC INSPECTOR FOLLOWUP ITEMS IFI-85-52-06, IFI-86-01-02. THESE ITEMS ARE ALSO BEING TRACKED AS SLT-85-1059-002 INADEQUATE PUBLIC ADDRESS SYSTEM.

SWEC-BFN-59-01 NUMEROUS COMPONENTS ARE NOT ENVIRONMENTALLY QUALIFIED.

SWEC-BFN-60-07 A PERMANENT POST-ACCIDENT SAMPLING SECTION SYSTEM IS NOT INSTALLED FOR UNITS 1, 2, OR 3.

SWEC-BFN-60-20 THE 1985 SALP REPORT STATED THE REVIEW OF THE INSERVICE TEST (IST) PROGRAM HAS BEEN DIFFICULT BECAUSE OF THE LICENSEE'S TENDENCY TO SEEK WAYS TO DISAGREE WITH NRC STAFF INTERPRETATIONS OF THE ASME CODE, AND DELAYS IN THE TIMELY RESOLUTION OF THESE DISAGREEMENTS.

10400-BFN-05 EFFECTS OF A CONCRETE EDGE ON THE EMBEDDED PLATE CAPACITY NEEDS TO BE REVIEWED.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 4 of 17

- 10700-NPS-04 REVIEW PROCUREMENT SPECIFICATIONS FOR COPPER TUBING SPECIFICATIONS ARE TO CLARIFY IF BENDING QUALITY TUBING (TEMPER PROPERTIES) IS DESIRED, AND IF SO PREVENT ANY SUBSTITUTION OF NON-BENDING QUALITY TUBING UNLESS UNIQUE IDENTIFICATION IS UTILIZED.
- 10900-NPS-02 ON THE USE OF A FISH HOOK TOOL TO BREACH FIRE BARRIERS WAS NOT VERIFIED. HOWEVER, THE USE OF FISH TAPE WAS FOUND TO BE ALLOWABLE IN M&AI-13. FISH TAPE HAS BEEN DELETED FROM WBN MAI-14. THIS SAME CHANGE SHOULD BE EVALUATED AT SQN.
- 10900-NPS-03 TERMINATIONS USING PIDG LUGS ON SOLID CONDUCTORS HAVE BEEN QUESTION'D IN SCR WBNEEB8537. THE CONDITION ALSO EXISTS AT SQN.
- 11103-NPS-01 CRITERIA FOR MECHANICAL SHOCK ARRESTORS (SNUBBERS) IS NOT CONTAINED IN UPPER TIER DOCUMENT TVA GENERAL CONSTRUCTION SPECIFICATION G-43, AND PACIFIC SCIENTIFIC DOCUMENT NUMBER 141 HAS NOT ALWAYS BEEN AVAILABLE AT ALL FOUR NUCLEAR PLANT SITES. CORPORATE REVIEW AND RESOLUTION NEEDS TO BE TAKEN SO THAT STANDARD CRITERIA CAN BE ESTABLISHED AT ALL FOUR TVA NUCLEAR PLANTS.
- 11200-NPS-01 THERE IS CURRENTLY NO DNE CORPORATE REVIEW OF SITE WORK CONTROL PROGRAMS. LACK OF SUCH A REVIEW PRECLUDES THE TRANSFER OF PROGRAM ENHANCEMENTS FROM SITE TO SITE AND VIOLATES THE NUCLEAR PROCEDURES SYSTEM POLICY ISSUED BY S. A. WHITE ON JUNE 6, 1986 WHICH SAYS THAT THE PROCEDURES USED AT EACH SITE FOR A GIVEN TASK SHOULD BE THE SAME. NOTE; THIS IS NOT PART OF THE WBN EFFORT.
- 11300-BFN-04 THE PARAMETERS OF NRC OIE BULLETIN 79-02 HAVE NOT BEEN FULLY ADDRESSED AT BFN. PERFORMANCE AND COMPLETION OF WORK DESCRIBED BY BFEP PI-86-05 AND SMMI 5.1-A ARE REQUIRED TO ANSWER THE REQUIREMENTS SET FORTH BY THE BULLETIN.
- 11300-BFN-05 NO SMMI/MMI HAS BEEN INITIATED BY THE SITE TO DETAIL THE INSPECTION AND ACCEPTANCE PARAMETERS (INSPECTION/ACCEPTANCE CRITERIA, INDEPENDENT (QC) VERIFICATION, ETC.) OF THE SAMPLE PROGRAM DETAILED BY BFEP PI 86-29.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 5 of 17

- 11300-NPS-02 GENERAL CONST. SPEC. G-32 IS INADEQUATE WITH RESPECT TO SSD BOLT INSTALLATION AND INSPECTION TIGHTENING CRITERIA. NO ENGINEERING EVALUATION/LABORATORY TESTS HAVE BEEN PERFORMED TO DETERMINE THE EFFECTS OF OVER-TIGHTENING ON THE BOLT AND/OR ANCHOR SHELL. BOLT ANCHOR INTEGRITY CANNOT BE VERIFIED. ALSO, TRAINING IS INADEQUATE AS INCONSISTENCIES HAVE BEEN IDENTIFIED IN BOLT INSTALLATION METHODOLOGY USED BY CRAFTSMEN.
- 11300-NPS-03 WBN-NCR-6320 AND THE SUBSEQUENT POTENTIAL GENERIC CONDITION EVALUATIONS HAVE IDENTIFIED RUSTED/CORRODED CONCRETE ANCHOR BOLTS AT THREE OF THE NUCLEAR PLANTS. EVALUATION IS REQUIRED TO DETERMINE THE SIGNIFICANCE OF RUSTED, CORRODED CONCRETE ANCHOR BOLTS FROM A GENERIC STANDPOINT AS WELL AS POTENTIAL DEFICIENCIES IN SITE MAINTENANCE/SURVEILLANCE CRITERIA.
- 19200-NPS-06 INCONSISTENCIES WERE IDENTIFIED IN THE APPLICATION OF QA REQUIREMENTS FOR CONDUIT AND ASSOCIATED HARDWARE. NEITHER G.C.S.G-40 NOR TVA SPECIFICATION 21.001 CONTAIN SUFFICIENT QUALITY ASSURANCE STATEMENTS TO ENSURE THE INTENT OF ESTABLISHED DNE REQUIREMENTS ARE MET. NOTE: WORK THIS CATD WITH CAP NUMBER C019203-SQN-03.
- 19201-NPS-01 THE W.S. RAUGHLEY MEMO, DATED 5/14/86 DOES NOT FULLY ADDRESS THE ACCEPTABILITY OR PRESCRIBE THE NECESSARY INSTRUCTIONS FOR ALL ACTIVE TVA NUCLEAR SITES TO FOLLOW WHICH WOULD ENSURE PAST FLEXIBLE CONDUIT INSTALLATIONS ARE IN COMPLIANCE WITH OR MEET THE INTENT OF GENERAL CONSTRUCTION SPECIFICATION G-40, REV. 9, SRN 11. IMPLEMENTATION OF THE POLICY MEMO AT EACH SITE WOULD ONLY PARTIALLY ADDRESS THE GENERIC IMPLICATION OF WBN NCR-6529.
- 19201-NPS-02 G.C.S.-G-40 SHOULD BE REVISED TO INCLUDE SPECIFIC TORQUE VALUES AS REQUIRED PER THE APPLICABLE MANUFACTURERS INSTRUCTIONS, RELATED TO THE INSTALLATION OF FLEXIBLE CONDUIT ASSEMBLIES. THIS ACT WOULD ASSURE THIS INFORMATION WAS AVAILABLE TO THE CONSTRUCTING ORGANIZATIONS.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 6 of 17

20000-NPS-01 IMPLEMENTATION OF NEP-5.2, "REVIEW," IS NOT COMPLETE OR FULLY EFFECTIVE AT THIS TIME. DESIGN VERIFICATION IS NOT YET FULLY EFFECTIVE AS DEMONSTRATED BY CONTINUED DIFFICULTIES IN COMPLETING TECHNICALLY SOUND CORRECTIVE ACTIONS. SYSTEMATIC INTERFACE OR SYSTEM REVIEWS ARE NOT YET SCOPED, SCHEDULED OR PROCEDURALIZED. SCOPE AND METHODOLOGY OF OPERATION AND MAINTENANCE DATA REVIEWS ARE NOT AVAILABLE. TECHNICAL REVIEW BRANCH INSTRUCTIONS ARE NOT YET ISSUED IN EEB, CEB, MEB AND NEB.

20000-NPS-03 NO METHOD CURRENTLY EXISTS BY WHICH TVA ONP MANAGEMENT CAN MEASURE SHIFTS IN EMPLOYEES' ATTITUDES TOWARD QUALITY AND MANAGEMENT EFFECTIVENESS.

20101-BFN-02 BROWNS FERRY ENGINEERING PROJECT PROCEDURE, BFEP-PI 86-18, R1, FOR ALL UNITS OF BFN DOES NOT CURRENTLY INCLUDE REQUIREMENTS FOR UPDATE AND MAINTENANCE OF THE C/R DATA BASE OVER THE LIFE OF THE PLANT.

20104-NPS-01 EEB DESIGN CONTROL PROCESS PROGRAM TO REVIEW ALL ELECTRICAL DESIGN GUIDES AND DESIGN STANDARDS AND RECOMMEND DELETIONS, ADDITIONS, AND REVISIONS, HAS NOT BEEN FULLY IMPLEMENTED.

20105-BFN-02 BFNPP COMMITMENTS 53 THROUGH 56 INDICATE THAT BFN AS-BUILT ENGINEERING DRAWINGS MAY NOT ACCURATELY REFLECT THE PLANT CONFIGURATION. INACCURACIES IN THE AS-BUILT DRAWINGS MAY HAVE BEEN REPRODUCED IN THE UFSAR.

20405-BFN-02 IN SOME SAFETY RELATED SYSTEMS, PIPING MAY BE NONCONFORMING DUE TO ERRORS IN PIPING BILL OF MATERIAL PROCUREMENT DOCUMENTS BECAUSE IN A NUMBER OF CASES, THE SAME INDIVIDUAL THAT INITIATED THE WORK WAS ALLOWED TO "CHECK" THE WORK.

20501-NPS-04 THE SARGENT AND LUNDY DEVELOPED ELECTRICAL ENGINEERING BRANCH CONTROLLING INSTRUCTIONS FOR ELECTRICAL CALCULATIONS HAVE NOT BEEN ISSUED AND /OR FULLY IMPLEMENTED.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 7 of 17

20901-BFN-02 IF INACCURACIES OR OMISSIONS OF CSSC ITEMS ARE IDENTIFIED IN THE BFN CSSC LIST AS A RESULT OF TVA CORRECTIVE ACTIONS FOR CATD 20901 BFN 01, AN ASSESSMENT OF THE RETROFIT ACTIONS NECESSARY TO ESTABLISH CONFORMANCE TO REQUIREMENTS OF THE QA PROGRAM WILL BE NECESSARY BY TVA FOR EACH ITEM SO IDENTIFIED. OMISSIONS FOUND IN THE BFN 1.11 CSSC LIST MAY REQUIRE RESOLUTION PRIOR TO RESTART.

21202-BFN-01 PROGRAM TO IMPLEMENT IEB 79-14 FOR BFN COMMENCED IN 1979, BUT IS NOT COMPLETED.

21302-BFN-01 DISCREPANCIES WERE FOUND BETWEEN THE FSAR SECTION 13.4 (TEST SUMMARY) AND A FEW TEST RESULTS PACKAGES, REFER TO ELEMENT SECTION 9.6-FSAR COMMITMENTS FOR SPECIFICS.

21302-BFN-02 PROCEDURAL DEFICIENCIES OF EVALUATION INCONSISTENCIES WERE FOUND IN TEST RESULTS PACKAGES AS DESCRIBED ON THE ATTACHMENT - 4 PAGES.

21804-NFS-01 EXISTING TVA PIPING DESIGN CRITERIA DO NOT EXCLUDE FLEXIBLE , SHORT, OPEN-ENDED BRANCH LINES FROM THE MOMENT OF INERTIA RATIO DECOUPLING RULES. THIS EXCLUSION COULD RESULT IN THIS TYPE OF LINE NOT BEING SEISMICALLY QUALIFIED BECAUSE SUCH PIPING COULD RESPOND DYNAMICALLY TO MOTION OF THE RUN LINE AND SUCH RESPONSE WOULD NOT BE PROPERLY ACCOUNTED FOR.

22003-NPS-01 DOCUMENTATION OF PUNCHING SHEAR EVALUATION WAS NOT INCLUDED IN THE PIPE SUPPORT CALCULATIONS. PUNCHING SHEAR REQUIREMENTS WERE NOT INCLUDED IN THE APPLICABLE PIPE SUPPORT DESIGN CRITERIA (REFERENCE: PM86-09) NOTE 1: THESE DEFICIENCIES ARE NOT SEQUOYAH RESTART ISSUES. NOTE 2: THESE DEFICIENCIES WERE PREVIOUSLY IDENTIFIED FOR BROWNS FERRY IN CATD 22003 BFN 01.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 8 of 17

- 22201-BFN-01 FIVE ANCHORS (47B1349-31, 47B1349-35, 47B2349-17, 47B3349-27, AND 47B3349-29) DO NOT SPECIFY GAP OR HAVE A "NO WELD TO PIPE" NOTE. THE POSSIBILITY FOR WELD FUSING TO THE PROCESS PIPE EXISTS FOR THESE ANCHORS. THE SAME POSSIBILITY EXISTS FOR TWO OTHER ANCHORS (47B452-149 AND 47B452-150), WHICH DO HAVE A "NO WELD TO PIPE" NOTE IN THE DRAWINGS. THE ANCHORS WITH WELD FUSED TO THE PROCESS PIPE MAY OVERSTRESS THE PROCESS PIPE AS WELL AS THE REAR PLATE. BFEF REPORTED THAT ALL ANCHORS (38) IN TORUS ATTACHED, RIGOROUSLY ANALYZED PIPING SYSTEMS WERE REVIEWED FOR THE CONCERN. HOWEVER, TWO ANCHORS (47b452-83 AND 47b452-168) WERE NOT INCLUDED IN THE REVIEW.
- 22203-BFN-01 PIPE SUPPORT DRAWINGS 47B452-711/R1 AND 47B452-708/R1 DO NOT SPECIFY SHEAR LUG ORIENTATION. PIPE SUPPORT DRAWING 47B452-182/R0 DOES NOT SHOW LUG DETAIL FOR PLATE 1/2" X 4-1/2" 2 4-1/2" AND FILLET WELD SPECIFIED FOR WFX31 AND EXISTING STEEL IS NOT CLEAR. LUG DETAIL 891 FOR PIPE SUPPORT 47B458-91/R0 DOES NOT SPECIFY HOLE SIZE.
- 22500-BFN-02 NO SEISMIC QUALIFICATION FOR BATTERY RACKS THAT SUPPORTS CLASS 1E BATTERIES, IS AVAILABLE.
- 22500-BFN-03 SEVERAL INCONSISTENCIES EXIST BETWEEN AND WITHIN THE FSAR AND CSSC LIST FOR THE IDENTIFICATION OF THE PROPER DESIGN CLASSIFICATION OF THE FOLLOWING BATTERY SYSTEMS: (1) 48 VOLT DC ANNUNCIATION SUPPLY SYSTEM (2) 48 VOLT DC COMMUNICATION SUPPLY SYSTEM (3) 24 VOLT DC NEUTRON MONITORING SUPPLY SYSTEM. (4) 750 VOLT DC STATION SUPPLY SYSTEM.
- 22600-BFN-01 FOR UNITS 1, 2, AND 3: A. NEED SATISFACTORY RESOLUTION OF SCR BFN MEB 8605 TO ADDRESS SEISMIC INTERACTION BETWEEN AS-BUILT CLASS I AND CLASS II COMPONENTS (INCLUDING LIGHTING FIXTURE SUPPORTS). B. NO COMPLETE PROGRAM EXISTS TO DESCRIBE AND CONTROL THE SEISMIC INTERACTION EVALUATIONS FOR CURRENT AND FUTURE DESIGN ACTIVITIES.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 9 of 17

22600-BFN-02 FOR BFN UNITS 1, 2, AND 3: A. NO DESIGN CRITERIA FOR LIGHTING FIXTURE SUPPORT EXIST FOR CURRENT AND FUTURE DESIGN OF LIGHTING FIXTURE SUPPORTS. B. NO TYPICAL DRAWINGS OR SPECIFIC DRAWINGS EXIST SHOWING SUPPORT DETAILS FOR LIGHTING FIXTURES, OTHER THAN DRAWINGS 48W1234-1, -2, AND -3. C. NO CALCULATIONS ON LIGHTING FIXTURE SUPPORTS EXIST, OTHER THAN CALCULATIONS FOR MAIN CONTROL ROOM LIGHTING FIXTURE SUPPORTS. D. NO ANALYTICAL DATA WERE PROVIDED IN EN DES CALCULATION, "MISCELLANEOUS STEEL MAIN CONTROL ROOM LIGHTING," TO DEMONSTRATE THE ADEQUACY OF THE CONTROL ROOM LIGHTING STRUCTURE AND FIXTURE SUPPORTS TO WITHSTAND A SEISMIC EVENT. NO END BRACING MEMBERS WERE PROVIDED IN THE EAST-WEST DIRECTION OF THE CONTROL ROOM LIGHTING STRUCTURE ON DRAWINGS 48W1284-1, -2, AND -3.

22800-BFN-02 LACK OF WRITTEN REQUIREMENTS TO USE AN INTERACTION EQUATION COULD RESULT IN IMPROPER DESIGN OR REEVALUATION OF UNISTRUT CLAMPS SUBJECTED TO SIMULTANEOUS LOADS IN MORE THAN ONE DIRECTION.

22902-BFN-01 AS DEFINED BY APPENDICES B AND C OF THE APPLICABLE ECTG REPORT, THERE ARE POTENTIALLY RADIOACTIVE PANEL DRAINS ROUTED INTO FLOOR DRAINS INSTEAD OF INTO CLOSED DRAINAGE SYSTEMS.

23208-BFN-01 CALCULATIONS PERFORMED FOR SOME SAFETY RELATED SYSTEMS USED A FORMULA TO CALCULATE MINIMUM PIPE WALL THICKNESS WITH YIELDS VALUES LESS THAN ALLOWED BY THE APPLICABLE INDUSTRY CODE (B31.1.0-1967).

23702-NPS-03 DESIGN GUIDE DG-E2.3.5, R3 DOES NOT PROVIDE GUIDANCE FOR SIZING MOTOR BRANCH CIRCUIT PROTECTION DEVICES FOR MOTORS RATED LESS THAN 1/2 HP. IT ALSO LACKS DIFFERENTIATION BETWEEN MAGNETIC ONLY BREAKERS AND MOTOR CIRCUIT PROTECTORS.

23801-BFN-02 NO EVIDENCE COULD BE FOUND THAT THE CORRECTIVE ACTION FOR CAR86-0078, 0079, AND 0080 (COMPUTERIZED CABLE PROGRAMS FOR ALL THREE UNITS AT BFN) HAD BEEN IMPLEMENTED.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 10 of 17

- 23900-BFN-05 THERE IS NO QA LEVEL DOCUMENTATION FOR ASSURANCE THAT ALL OF THE ABANDONED OR SPARED CABLES ARE INDICATED ON THE MANUALLY ROUTED CONDUIT AND CABLE SCHEDULE DRAWINGS FOR UNIT 1 AND 2. THERE ARE NO RECORDS FOR ABANDONED OR SPARED CABLES FOR THE COMPUTER GENERATED FILL QUANTITIES CANNOT BE VERIFIED, AND THERE ARE NO RECORDS AVAILABLE FOR RACEWAY FILL FOR UNITS 1 AND 2 MANUALLY ROUTED CABLES. NO QA LEVEL PROCEDURES EXIST TO ENSURE THAT USERS WILL NOT VIOLATE TRAY FILL QUANTITIES.
- 23900-BFN-07 NO QA LEVEL PROCEDURES EXIST FOR THE DEVELOPMENT OF THE CONDUIT AND CABLE SCHEDULES. THEREFORE, THE ADEQUACY OF DESIGN, ROUTING, REVISION, AND ISSUE PROCESS FOR CABLES AND CONDUITS CANNOT BE VERIFIED.
- 23900-BFN-08 THERE ARE NO PROCEDURE FOR CONSTRUCTION RECORD THE INSTALLED CUT OR TERMINATED CABLE LENGTHS. ALSO, THERE IS NO PROCEDURE FOR THE FEEDBACK OF CABLE LENGTH DATA AND FIELD REVISION OF CABLES TO ENGINEERING
- 23900-BFN-09 TVA ONGOING PROGRAM OF INCORPORATING THE APPROPRIATE CABLE LENGTHS OF INSTALLED CABLES PER POLICY MEMO PM 87-26 IS NOT COMPLETED.
- 24104-BFN-01 DURING WALKDOWN PERFORMED BY THE EVALUATION TEAM THE FOLLOWING OBSERVATIONS WERE MADE: A) DIESEL A3A, THE ADAPTER CAN BE ROTATED BY HAND APPROXIMATELY A QUARTER TURN. B) DIESEL B3B, THERE IS A LIGHT MOVEMENT AT THE CONNECTOR NUT. C) DIESEL C3C, THE COUPLING AND ADAPTER CAN BE ROTATED BY HAND APPROXIMATELY A QUARTER TURN. D) DIESEL D3D, THE COUPLING AND ADAPTER CAN BE ROTATED SEVERAL TURNS BY HAND. E) THE CONDITION OF THE LOOSE ASSEMBLIES HAS NOT BEEN REVIEWED FOR SAFETY IMPLICATION AT BFN.
- 24200-BFN-04 IMPLEMENTATION OF ECNS P0753 AND 09822 TO SATISFY NRC VIOLATION NOTICE IS PART OF A LONG TERM COMMITMENT BY TVA. NO ANALYSIS COULD BE FOUND TO JUSTIFY THE CHANGE OF CONDUIT FROM NONCLASS 1E TO DIVISION II AS INDICATED BY NRC BFN BWP 8304 P1. ALSO, NO EVIDENCE COULD BE FOUND OF ANY REVIEW PERFORMED TO DETERMINE WHETHER SIMILAR CASES MAY EXIST.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 11 of 17

- 24300-BFN-02 THE FSAR DOES NOT REFLECT CURRENT DIESEL-GENERATOR LOADING AND IS VAGUE AS TO THE EXTENT OF BFN COMPLIANCE TO SAFETY GUIDE 9. IN ADDITION, THE STANDBY DIESEL GENERATOR SYSTEM DESIGN CRITERIA (BFN-50-7082) IS ALSO UNCLEAR ABOUT THE EXTENT OF BFN COMPLIANCE WITH SAFETY GUIDE 9.
- 26600-NPS-01 NO INTEGRATED PROGRAM COULD BE IDENTIFIED FOR THE DESIGN AND THE DESIGN CONTROL OF RACEWAY AND CABLE SYSTEMS.
- 30103-BFN-01 THE REACTOR FEEDWATER (RFW) PUMP LOW LOAD BYPASS LINES (MIN FLOW LINE) MAY HAVE EXCESSIVE PIPE VIBRATION. HOWEVER, THIS CANNOT BE VERIFIED UNLESS INSPECTION IS PERFORMED DURING OPERATION. THE INSPECTION SHOULD INCLUDE A CLEARANCE CHECK AND THERMAL MOVEMENT VERIFICATION TO ESTABLISH IF ADDITIONAL HANGERS ARE NECESSARY.
- 30103-BFN-03 THE REACTOR FEED WATER (RFW) PUMP LOW LOAD BYPASS LINES (MIN FLOW LINE) MAY HAVE EXCESSIVE PIPE VIBRATION. HOWEVER, THIS CANNOT BE VERIFIED UNLESS AN INSPECTION IS PERFORMED DURING OPERATION. THE INSPECTION SHOULD INCLUDE A CLEARANCE CHECK AND THERMAL MOVEMENT VERIFICATION TO ESTABLISH IF ADDITIONAL HANGERS ARE NECESSARY.
- 30107-BFN-01 THE EXTENT OF DEFICIENT AND UNQUALIFIED COATINGS IN LEVEL 1 AREAS IS INDETERMINATE. AN UNQUALIFIED COATINGS LOG HAS NOT BEEN DEVELOPED AND MAINTAINED TO ENSURE THAT SOLID DEBRIS PRODUCED BY UNQUALIFIED COATINGS WILL NOT COMPROMISE THE EMERGENCY CORE COOLING SYSTEM.
- 30115-NPS-01 DEFICIENCIES WITH COMPONENT IDENTIFICATION ON DRAWINGS AND DATA BASES HAVE BEEN IDENTIFIED TO EXIST AT ALL SITES AND ARE PERCEIVED TO RESULT FROM THE LACK OF CENTRALIZED CONTROL FOR ASSIGNMENT OF COMPONENT IDENTIFICATION. PROVIDE CORRECTIVE ACTION PLAN FOR RESOLUTION TO THE ISSUES AS DISCUSSED IN THE REFERENCED REPORT (ATTACHED). THE INDIVIDUAL SITE DIRECTORS HAVE BEEN NOTIFIED BY CATD TO ADDRESS MISSING AND/OR INCORRECT EQUIPMENT TAGS.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 12 of 17

30200-NPS-01

UNDER THE ELECTRICAL AND COMMUNICATION EQUIPMENT SUBCATEGORY, TWENTY-TWO CATDS HAVE BEEN ISSUED TO DATE IDENTIFYING SPECIFIC DEFICIENCIES AT ALL FOUR NUCLEAR SITES. THE TWO SIGNIFICANT AREAS WHERE PROBLEMS WERE IDENTIFIED WERE IN RAYCHEM CONTROL AND SHUTDOWN BOARD BUS VOLTAGE REGULATION. THE SPECIFIC DEFICIENCIES IN THE ENGINEERING, OPERATING AND QUALITY ASSURANCE ORGANIZATIONS AND INCLUDED PROCEDURAL WEAKNESSES, VAGUE OR NONEXISTING ACCEPTANCE CRITERIA AND WEAKNESSES IN THE CONTROL AND AUDITING PROCESSES. BECAUSE THE DEFICIENCIES CROSSED ORGANIZATIONAL AND FUNCTIONAL LINES, TVA'S CORPORATE ORGANIZATION SHOULD ENSURE A PROGRAMMATIC CORRECTIVE ACTION RESOLUTION FOR THESE TWO AREAS AND CONSIDER APPLYING ANY LESSONS LEARNED TO OTHER MAJOR ELECTRICAL PROGRAMS.

30202-NPS-01

DPM N7701 STATES THAT RELAYS THAT MONITOR SAFETY RELATED AUXILIARY POWER SYSTEM VOLTAGE HAVE EFFECTIVE 0 VOLT SETPOINTS. THE DESCRIPTION CONTINUES, IGNORING THE FACT THAT AUTOMATIC BOARD TRANSFERS ARE INITIATED FOR DEGRADED VOLTAGES (E.G. 95% THAT LASTED FOR 5 MINUTES WBN) THE DESCRIPTION OF VOLTAGE TRANSFER EVENTS AS APPEARS IN DPM N7701 IS CONTRARY TO THAT GIVEN IN THE FSAR.

30400-NPS-03

AS NOTED IN THE FINDINGS AND COLLECTIVE SIGNIFICANCE SECTIONS OF REPORT 30400, THERE IS A LACK OF CORPORATE CONTROL OVER DESIGN AND CONSTRUCTION STANDARDS AND REQUIREMENTS AND THEIR USE AT THE NUCLEAR SITES.

30403-BFN-01

1. MANHOLES NEED A GENERAL CLEANUP. 2. SUMP PUMP ROUTING CHECKS ARE NOT ADEQUATE TO ENSURE CONTINUED OPERATION. 3. MANHOLE C IS COLLECTING SURFACE WATER BECAUSE THE MANHOLE IS IN A LOW AREA, AND ACCORDING TO THE DRAWING 10N319-1 RA, THE COVER SHOULD BE ABOVE GRADE. 4. SOME OF THE SUMP PUMPS ELECTRICAL SUPPLY CORD PLUGS CONTAIN A CIRCUIT INTERRUPTING DEVICE THAT IS CAUSING NUISANCE TRIPS. THIS TRIPPING WAS OBSERVED IN MANHOLES E AND G.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 13 of 17

30403-BFN-02

1. SEVERAL DOZEN CABLES HAVE BEEN ROUTED OUTSIDE THE CABLE TRAYS IN MANHOLE T AND THERE IS INADEQUATE SLACK TO GET THE CABLES IN THE TRAYS. A LARGE NUMBER OF CABLES ARE ROUTED THROUGH MANHOLE T, AND IT MAY NOT BE POSSIBLE TO PUT ALL THE CABLES IN TRAYS. EXCEPT FOR MANHOLE T, ABOUT THE ONLY CABLES THAT ARE OUT OF THE TRAYS ARE SPARE CABLES, PULL WIRES, AND SUMP PUMP POWER CABLES. IN MANHOLE H, A COUPLE OF CABLES CROSS TRAYS ON THE INSIDE EDGE OF THE TRAY, AND ONE CABLE IS OUT OF THE TRAYS. IN MANHOLE E, SOME OF THE 4-KV BUS TIE CABLES FOLLOW THE TOP EDGE OF THE CABLE TRAY. THE DRAWINGS FOR MANHOLES F, G, H, AND J SHOW A METAL BARRIER AND COVER IN THE TRAYS TO SEPARATE 480-V AND 4-KV CABLES. THESE BARRIERS AND COVERS ARE NOT INSTALLED. IT IS DOUBTFUL THEY COULD BE INSTALLED AND STILL MAINTAIN SUFFICIENT BEND RADIUS ON THE 4-KV CABLES. THE 4-KV BUS TIE LINE CABLES ARE ABANDONED ANYWAY, SO THE BARRIERS MAY NOT BE NEEDED.

30403-BFN-03

THE TERMINAL STRIP IN JUNCTION BOX 7118 IN MANHOLE T NEAR THE CAS HAS BEEN FLOODED AND IS SEVERELY CORRODED. THE BOX WAS INSTALLED UNDER INCOMPLETE ECN PC286. IT CONTAINS CABLES FOR CCTVG, H, AND J. THE MANHOLE NEEDS A SUMP PUMP. THE TERMINAL STRIP SHOULD BE REPLACED WITH A WATERPROOF SPLICE. AN FCR AGAINST ECN P0286 COULD ADD A SUMP PUMP AND REMOVE THE TERMINAL STRIP.

30403-NPS-01

PROBLEMS WERE IDENTIFIED WITH STANDING WATER IN ELECTRICAL MANHOLES AT ALL SITES ALTHOUGH THIS IS NOT CONSIDERED SAFETY-RELATED. A POTENTIAL SAFETY ISSUE MAY EXIST WITH REGARD TO "WATER-TREEING" OF INSULATION ON LEVEL V VOLTAGE CABLES. CATD 30403-SQN-01 WAS WRITTEN FOR DNE TO ADDRESS THIS ISSUE AT SQN; HOWEVER, BECAUSE THIS ISSUE IS GENERIC, A RESPONSE SHOULD BE MADE APPLICABLE FOR ALL SITES.

30600-NPS-01

AS NOTED IN THE FINDINGS, PRELIMINARY ANALYSIS, AND COLLECTIVE SIGNIFICANCE SECTIONS OF REPORT 30600, VARIOUS PROBLEMS EXIST WITH PROCEDURES RELATED TO FIRE PROTECTION. THESE PROBLEMS INCLUDE PROCEDURAL CONTENT, PERSONNEL ERROR IN FOLLOWING PROCEDURES, AND LACK OF ADEQUATE PROCESS TO ENSURE COMMITMENTS ARE REFLECTED IN PROCEDURES. THESE DISCREPANCIES WERE OBSERVED AT THREE OF TVA'S FOUR NUCLEAR SITES.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 14 of 17

- 30600-NPS-02 AS NOTED IN THE FINDINGS, PRELIMINARY ANALYSIS, AND COLLECTIVE SIGNIFICANCE SECTIONS OF REPORT 30600, THERE ARE INADEQUATE CONTROLS FOR REVIEW OF RESULTS TO ENSURE COMPLIANCE WITH COMMITMENTS RELATED TO FIRE PROTECTION. THIS DISCREPANCY WAS OBSERVED AT WATTS BAR NUCLEAR PLANT.
- 30700-NPS-01 AS NOTED IN THE FINDINGS, PRELIMINARY ANALYSIS AND COLLECTIVE SIGNIFICANCE PERSONNEL LACK UNDERSTANDING OF REGULATORY REQUIREMENTS OR COMMITMENTS. THIS DISCREPANCY WAS OBSERVED AT WBN AND SQN.
- 30711-NPS-01 A DIFFERENCE IN OPINION HAS BEEN IDENTIFIED BETWEEN LINE MANAGEMENT AND NSRS REGARDING SINGLE FAILURE CRITERIA FOR THE MSIVS AT BLN. BASED ON AVAILABLE DOCUMENTATION TO DATE, THERE HAS BEEN NO RESOLUTION TO THIS ISSUE.
- 30801-BFN-01 THE PHASE II TASK FORCE HAS RECOMMENDED THAT APPROPRIATE PERSONNEL SHOULD MEET AND DEVELOP A PLAN FOR SAFETY RIGGING THE MAIN STEAM RELIEF VALVES TO AND FROM THE DRYWELL. INCLUDED IN THIS PLAN SHOULD BE DEVELOPMENT OF A SPECIFIC RIGGING PROCEDURE, A MODIFICATION FOR INSTALLING A HATCH IN THE DRYWELL GRATING, AND THE ADDITION OF JIB CRANES AND DEDICATED RIGGING EQUIPMENT FOR MSRV REMOVAL.
- 30901-NPS-01 IDENTIFICATION OF AN ACCEPTABLE SUBSTITUTE FOR TEFLON TAPE HAS NOT BEEN AGGRESSIVELY PURSUED. INCONSISTENCIES EXIST BETWEEN WBN, BFN, AND SQN ON THE RESTRICTIONS OF USE OF TEFLON TAPE.
- 31211-BFN-01 THERE ARE NOT "AS CONSTRUCTED" DRAWINGS FOR OUTSIDE SECURITY LIGHTING. WORKPLAN 8521 (ECN P0286) WAS PARTIALLY COMPLETED AND MARKED UP DRAWINGS WERE NOT SENT TO DCC PER STANDARD PRACTICE BF 8.3. AS A RESULT, NO "AS CONSTRUCTED" DRAWINGS WERE ISSUED REFLECTING THE ACTUAL EQUIPMENT CONFIGURATION. MAINTENANCE PERSONNEL HAVE HAD TO MAINTAIN AND REPAIR SECURITY LIGHTING USING DATA FROM ECN P0286.
- 31212-NPS-01 DURING PERIODS OF INOPERATIVE ELECTRONIC SEARCH EQUIPMENT, ACCEPTANCE CRITERIA FOR THE "PAT DOWN SEARCH" FUNCTION HAS NOT BEEN ADEQUATELY ADHERED TO BY PSS OFFICERS.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 15 of 17

- 31300-NPS-01 AS NOTED IN THE FINDINGS AND COLLECTIVE SIGNIFICANCE SECTIONS OF REPORT 31300, THERE HAS BEEN A LACK OF CORPORATE CONTROL OVER THE IMPLEMENTATION OF DESIGN, CONSTRUCTION STANDARDS AND REQUIREMENTS INTO THE OPERATIONS ACTIVITIES AT BFN AND SQN RELATIVE TO CONCRETE AND GROUT REPAIRS.
- 31303-NPS-01 DURING EVALUATION OF A CONCERN IN FACT SHEET NUMBER 313.03 WBN, RELATING TO THE CONTROLLED USE AND LABELING OF CHEMICAL CLEANING AGENTS, SOLVENT ECT. IT WAS FOUND THAT EACH TVA SITE HAS A SITE SPECIFIC PROGRAM TO ADDRESS THIS ISSUE HOWEVER, NO CORPORATE PROGRAM EXISTS TO ADDRESS THE CONTROL USE OF CHEMICALS AND THEIR LABELING REQUIREMENTS FOR USE SUCH AS, SYSTEM COMPATIBILITY ETC.
- 40300-NPS-01 THERE IS A LACK OF CONTROL OF SCRAP MATERIAL A PROGRAM NEEDS TO BE IMPLEMENTED THAT WOULD CONTROL SCRAP OR RETIRED MATERIAL FROM THE WORK AREA THROUGH REMOVAL FROM THE SITE. NOTE: THIS IS NOT PART OF THE WATTS BAR EFFORT.
- 40700-BFN-07 SOME WORKPLANS AT BFN DO NOT PROVIDE DOCUMENTED TRACEABILITY FOR CSSC PRESSURE BOUNDARY MATERIAL. THIS VIOLATES PROCUREMENT AND TRACEABILITY REQUIREMENTS IN 10 CFR 50, APPENDIX B, CRITERIA VII AND VIII. (SEE MATERIAL CONTROL FACT SHEET 40700-BFN-ONP)
- 40700-BFN-08 BFN PERFORMS MODIFICATIONS ON CSSC SYSTEMS WITHOUT REVISING ORIGINAL DESIGN AND CONSTRUCTION DRAWINGS AND DOCUMENTATION. ALSO, BFN PERFORMS MODIFICATIONS WITHOUT APPROPRIATE DESIGN INPUT DOCUMENTATION. THIS IS IN VIOLATION OF 10 CFR 50, APPENDIX B, CRITERIA III, V, AND VI.
- 40700-NPS-01 CONTRARY TO THE REQUIREMENTS OF 10 CFR 50, APPENDIX B, CRITERION VIII, THE TVA MATERIAL CONTROL PROGRAM DID/DOES NOT ENSURE THE RECEIPT, STORAGE, AND INSTALLATION OF CRITICAL SYSTEMS, STRUCTURES, AND COMPONENTS (CSSC) MATERIAL THAT IS PROPERLY CERTIFIED AND MARKED, IDENTIFIED, AND VERIFIED TRACEABLE TO ITS CERTIFIED MATERIALS TEST REPORT (CMTR) THROUGHOUT THE FABRICATION, ERECTION, INSTALLATION, AND USE OF THE ITEM.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 16 of 17

707-NPS-02 A BROAD-BASED MANAGEMENT DEVELOPMENT PROGRAM MUST BE IMPLEMENTED TO UPGRADE THE COMPETENCE OF INDIVIDUAL MANAGERS IN THE SHORT TERM AND ENSURE THE SUCCESSION OF ABLE MANAGERS IN THE LONG TERM.

705-NPS-01 REPRESENTATION OF MINORITIES, WOMEN, AND THE HANDICAPPED WITHIN THE OFFICE OF NUCLEAR POWER IS FAR BELOW EXPECTED PERCENTAGES AS DETERMINED BY THE U.S. EQUAL EMPLOYMENT OPPORTUNITY COMMISSION.

707-NPS-01 UP-TO-DATE ORGANIZATION BULLETINS HAVE NOT BEEN ISSUED FOR THE DIVISION OF NUCLEAR ENGINEERING AND THE DIVISION OF NUCLEAR CONSTRUCTION.

717-NPS-04 MANAGEMENT CONTROLS ARE NOT IN PLACE OR NOT SUFFICIENT TO INSURE THE QUALITY OF JOB DESCRIPTIONS MEET OR EXCEED THE QUALIFICATIONS OF A REGULATORY DOCUMENT.

717-NPS-14 "TRAINING RECORDS" ARE FRAGMENTED THROUGHOUT NUCLEAR POWER.

80106-BFN-01 SIGNIFICANT CONDITION REPORT SCR WBNWBP8601 R 0 WAS WRITTEN ON OCTOBER 23, 1986. IT WAS DETERMINED TO BE A POTENTIAL GENERIC CONDITION WHICH REQUIRES AN ENGINEERING EVALUATION TO BE MADE AT OTHER TVA SITES. (TVA MEMORANDUM J.R. LYONS TO THOSE LISTED -- OCTOBER 23, 1986 RIMS B26 86 1023 016). A REVIEW OF THE CONDITION WAS PERFORMED AT BFN BY R WRIGHT ON DECEMBER 22, 1986 AND COUNTER SIGNED BY T. G. CHAPMAN ON DECEMBER 30, 1986. THE CATD IS WRITTEN TO DETERMINE WHAT ACTION WAS DONE BY BFN TO RESOLVE THIS PROBLEM CONDITION. REPORTED ATTEMPTS TO OBTAIN THIS INFORMATION FROM MR. WRIGHT DURING THE WEEK OF JUNE 8, 1987 HAVE BEEN UNSUCCESSFUL.

80454-NPS-01 THE QACEG PERFORMED AN EVALUATION OF THE ISSUE DEALING WITH; TVA FSAR COMMITMENTS, SAFETY EVALUATION REPORT (SER) AND NRC QUESTION RESPONSES BEING TREATED LIGHTLY OR NOT BEING MET AT ALL. PRIOR TO THE QACEG EVALUATION OF THIS ISSUE, SIGNIFICANT CONDITION REPORTS (SCR) SCRGENNEB8602 AND SCR BLNNEB8702 HAD BEEN GENERATED WHICH ADDRESS THE ACCURACY OF FSAR STATEMENTS. CATD 80454-NPS-01 IS BEING USED TO TRACK THE COMPLETION OF THE CORRECTIVE ACTION AND ACTION TO PREVENT RECURRENCE OF BOTH SCRS.

ENCLOSURE 2
BROWNS FERRY NUCLEAR PLANT (BFN)
CORRECTIVE ACTION TRACKING DOCUMENTS
(CONTINUED)

Page 17 of 17

I-85-373-NPS-02-10

"VALIDITY OF NDE OJT DOCUMENTATION," FOLLOW-UP INVESTIGATION TO DEFINE IN DETAIL THE FINDINGS DOCUMENTED.

90700-BFN-01

THE PERSONNEL SAFETY HAZARDS ASSOCIATED WITH MAIN STEAM RELIEF VALVE REMOVAL AND RE-INSTALLATION IN THE DRYWELL AREA HAS BEEN WIDELY KNOWN BY PLANT EMPLOYEES AND MANAGEMENT SINCE AT LEAST AUGUST OF 1979. BFN-DCR-1879 WAS ISSUED TO IMPROVE THE SAFETY OF THIS OPERATION. THE IMPLEMENTATION OF THIS DCR HAS BEEN POSTPONED SEVERAL TIMES. INTERMEDIATE MEASURES TAKEN TO SAFELY PERFORM THIS JOB ARE LARGELY UNKNOWN TO THOSE PRESENTLY DOING THE WORK.

90900-NPS-05

INTERFERENCES WITH FIXED LADDER RUNGS ARE NUMEROUS THROUGHOUT THE PLANT. SOME PIPING INTERFERENCES GREATER THAN TWO INCHES IN DIAMETER INDICATE INADEQUACIES IN THE DESIGN REVIEW PROCESS.

91000-BFN-02

ADDITIONAL LIGHTING AND HANDRAILS HAVE NOT BEEN INSTALLED ON THE INTAKE GATE STRUCTURE NO. 3 TO RESOLVE AN EMPLOYEE SAFETY CONCERN AND COMPLETE DCR D3251. THIS WORK SHOULD NOT BE DELAYED UNTIL THE NEXT OUTAGE, UNIT 3, CYCLE 5.