

Docket Nos. 50-259, 50-260,
and 50-296

June 3, 1992

LICENSEE: Tennessee Valley Authority

FACILITY: Browns Ferry Nuclear Plant, Units 1, 2, and 3

SUBJECT: SUMMARY OF THE MAY 19, 1992 MEETING WITH THE TENNESSEE VALLEY
AUTHORITY REGARDING THE SAFE SHUTDOWN ANALYSIS FOR THE BROWNS FERRY
NUCLEAR PLANT, UNITS 1, 2, AND 3

On May 19, 1992, representatives of the NRC staff and the Tennessee Valley Authority (TVA) met at the TVA office in Rockville, Maryland. TVA's methodology for the Browns Ferry Nuclear Plant (BFN) 10 CFR 50, Appendix R safe shutdown analysis was discussed. Meeting attendees are listed in Enclosure 1. A copy of the handout provided by TVA is given as Enclosure 2.

To minimize modifications and expedite the BFN Unit 2 restart, TVA evaluated only one safe shutdown path. This analysis requires numerous manual actions because of the extensive local operations required to preserve the single success path. To support restart of BFN Unit 3, TVA is using a computer-aided fire area analysis to evaluate multiple success paths. Preliminary results indicate that few modifications will be required, while substantially reducing the number of manual actions. The staff did not indicate any problems with the concepts presented. TVA noted that similar analyses have been reviewed for several other sites. A submittal describing the BFN Unit 3 safe shutdown analysis is expected around September 1, 1992. No particular conclusions were developed at this meeting, since staff review is dependent on this submittal.

Original signed by
Joseph F. Williams, Project Manager
Project Directorate II-4
Office of Nuclear Reactor Regulation

Enclosures:

1. Attendance List
2. TVA Handout

cc w/enclosures:
See next page

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NAME	MSanders <i>ms</i>	JWilliams <i>js</i>	FHebdon <i>fh</i>		
DATE	6/3/92	6/3/92	6/3/92		

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Browns Ferry Nuclear Plant

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ATTENDEES

BROWNS FERRY SAFE SHUTDOWN ANALYSIS

MAY 19, 1992

<u>NAME</u>	<u>ORGANIZATION</u>
Joe Williams	NRR/DRPE/PD II-4
Joe McCarthy	TVA, Restart Licensing
Roger Huston	TVA, Rockville Licensing
Amargit Singh	NRR/SPLB
David Notley	NRR/SPLB
Bob Layton	Bechtel
Dan Stewart	TVA, Mechanical Engineering
Julio Gómez	TVA, Electrical Engineering
Michael Mikolanis	Bechtel, SERCH Licensing
Bill Crouch	TVA, BFN Engineering

APPENDIX R

FIRE SAFE SHUTDOWN

INTRODUCTION

BROWNS FERRY NUCLEAR COMMITMENT

- 10CFR50 Appendix R
- Unit 2 Fire Protection Submittal and Basis

BROWNS FERRY NUCLEAR'S OBJECTIVES FOR UNIT 3 RECOVERY

- Minimize Mods and Manual Operator Actions On Unit 3
- Reduce Unit 2's Manual Actions Where Practicable
- Minimize Restrictions on Unit 1

UNIT 3 ACTION PLAN

- Unit 3 and Common Systems Analysis
- Analyze More Paths - RCIC, Auxiliary Power System (APS), Shutdown Cooling, For Example
- Utilization of Computer Aided Fire Area Analysis - EPM (Used at Comanche Peak, Peach Bottom, Limerick 1 and 2, Point Beach 1 and 2)

BROWNS FERRY NUCLEAR ANALYSIS TECHNIQUES

FOR UNIT 2

- Single shutdown path protected with Loss Of Offsite Power
- Dictated specific Safe Shutdown Instructions
- Minimized required cables
- Resulted in numerous manual actions because shutdown circuits were all local control
- Minimum cables analyzed and minimized Mods
- NRC approved SER Dated November 3, 1989

FOR UNIT 3

- Automated for more analysis iterations
- More Auxiliary Power System included in the scope
- More circuits in the Control Room
- Use of RCIC and Backup control
- Multiple Shutdown Paths Identified
- Licensing Submittal of Unit 3 Safe Shutdown analysis and program due to NRC 09/01/88

PRELIMINARY RESULTS

- **Update on Progress**
 - a. All 25 Fire Areas Analysis Completed
 - b. Data Validation Completed

- **Integration with Unit 2**

- **Very Few Modifications (22 of 25 fire areas reviewed)**
 - a. (4) Reroutes
 - b. (5) Mechanical
 - c. (16) Control Circuit Isolation Modifications (4KV SDBDs)

- **Less Operator Actions**

PRELIMINARY RESULTS

MANUAL ACTIONS

<u>FIRE AREA</u>	<u>DESCRIPTION</u>	<u>U2</u>	<u>U2 & U3</u>
2 - 1	U2 RB West 519 & 565	253	116
2 - 2	U2 RB East 519 & 565	293	142
2 - 3	U2 RB 593	278	176
15	U3 - 480V SDBD RM 3B	207	90

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