

MAY 25 1994

*Official copy*

Docket Nos. 50-259, 50-260, 50-296  
License Nos. DPR-33, DPR-52, DPR-58

Tennessee Valley Authority  
ATTN: Mr. Oliver D. Kingsley, Jr.  
President, TVA Nuclear and  
Chief Nuclear Officer  
64 Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Gentlemen:

SUBJECT: MANAGEMENT MEETING SUMMARY

On May 10, 1994, the NRC staff met at the Region II offices with representatives of the Tennessee Valley Authority (TVA) management staff to discuss the control of Browns Ferry Unit 3 recovery activities requiring entry into a Unit 2 LCO.

Enclosure 1 is a list of the individuals who attended the meeting and Enclosure 2 is the handout material supplied by TVA.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10 Code of Federal Regulations, a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this letter, please contact us.

Sincerely,

(Original signed by J. Johnson)

Jon R. Johnson, Director  
Division of Reactor Projects

Enclosures:

1. List of Attendees
2. Presentation Notes

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PDR ADDCK 05000259  
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MAY 25 1994

Tennessee Valley Authority

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cc w/encls:

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Mr. D. E. Nunn, Vice President  
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Mr. R. D. Machon, Site Vice President  
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Nuclear Assurance and Licensing  
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Site Licensing Manager  
Browns Ferry Nuclear Plant  
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3B Lookout Place

Chairman  
Limestone County Commission  
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State Health Officer  
Alabama Dept. of Public Health  
434 Monroe Street  
Montgomery, AL 36130-1701

bcc w/encls: (See page 3)

MAY 25 1994

Tennessee Valley Authority

3

bcc w/encls:

E. W. Merschoff, RII  
J. R. Johnson, RII  
M. S. Lesser, RII  
B. M. Bordenick, OGC  
M. S. Callahan, GPA/CA  
G. C. Lainas, NRR  
F. J. Hebdon, NRR  
D. C. Trimble, NRR  
J. F. Williams, NRR  
L. J. Watson, RII  
Document Control Desk

NRC Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
Route 12, Box 637  
Athens, AL 35611

SEND	OFC	DDRP/RII	DRP/RII			
TO	NAME	JYork <i>JY</i>	MLesser <i>ML</i>			
PDR?	DATE	05/24/94	05/24/94	/ /94	/ /94	/ /94
Yes	No	COPY?	Yes	No	Yes	No

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DOCUMENT NAME: [G:\SEC4A\BFWSTOR1.SUM]

ENCLOSURE 1

LIST OF ATTENDEES

NRC

E. W. Merschhoff, Acting Deputy Regional Administrator, RII  
J. R. Johnson, Acting Director, DRP, RII  
A. F. Gibson, Director, DRS, RII  
M. S. Lesser, Section Chief, DRP, RII  
J. J. Blake, Section Chief, DRS, RII  
C. A. Patterson, Senior Resident Inspector, DRP, RII  
G. A. Schnebli, Resident Inspector, DRP, RII  
F. J. Hebdon, Director Project Directorate II-4, NRR (Telecom)  
J. F. Williams, Project Manager, Project Directorate II-4, NRR  
D. C. Trimble, Project Manager, Project Directorate II-4, NRR (Telecom)  
J. W. York, Project Engineer, DRP, RII

TVA

G. Preston, Plant Manager  
D. Stinson, Recovery Manager  
P. Salas, Licensing Manager

ENCLOSURE 2

# **Control of Unit 3 Recovery Activities Requiring Entry Into a Unit 2 LCO**

NRC/TVA MEETING

MAY 10, 1994

TVA

## **I. OPENING REMARKS**

- **DISCUSS DECISION MAKING PROCESS AND RATIONALE FOR ENTERING UNIT 2 LCOs IF NEEDED TO PERFORM UNIT 3 RECOVERY ACTIVITIES**
- **MANAGE THE PROCESS TO ENSURE THAT WE FOCUS ON SAFETY**
- **DECISION PROCESS INCLUDES:**
  - **Risk assessments**
  - **Compensatory measure availability**
  - **Thorough evaluation of scheduling options**
  - **Assessment of safety from a Unit 2 point of view**
  - **Use limited portion of allowed outage time (AOT)**
- **MAXIMIZE USE OF SCHEDULED SYSTEM/REFUELING OUTAGE WINDOWS**
- **PROCEDURAL CONTROLS UNDER DEVELOPMENT**

### **III. IDENTIFICATION OF UNIT 3 ACTIVITIES IMPACTING UNIT 2 LCOs**

- **BACKGROUND**
  - LCO Impacts identified during workplan development
  - Workplans developed following design completion
  - System walkdowns often needed to identify impacts
- **MOST LCO IMPACTS IDENTIFIED**
  - Design changes 96% complete
  - Workplans 87% developed
- **ANTICIPATE FEW LCO IMPACTS REMAIN**

ENCLOSURE 2

# **Control of Unit 3 Recovery Activities Requiring Entry Into a Unit 2 LCO**

NRC/TVA MEETING

MAY 10, 1994

TVA

# CONTROL OF UNIT 3 RECOVERY ACTIVITIES REQUIRING ENTRY INTO A UNIT 2 LCO

## AGENDA

- |   |               |
|---|---------------|
| I. OPENING REMARKS  | E. PRESTON    |
| II. CONTROLS FOR VOLUNTARY<br>ENTRY INTO A UNIT 2 LCO             | E. PRESTON    |
| III. IDENTIFICATION OF UNIT 3 ACTIVITIES<br>IMPACTING UNIT 2 LCOs | K. D. STINSON |
| IV. DISCUSSION OF IDENTIFIED ACTIVITIES                           | K. D. STINSON |
| V. CLOSING REMARKS  | E. PRESTON    |

## I. OPENING REMARKS

- DISCUSS DECISION MAKING PROCESS AND RATIONALE FOR ENTERING UNIT 2 LCOs IF NEEDED TO PERFORM UNIT 3 RECOVERY ACTIVITIES
- MANAGE THE PROCESS TO ENSURE THAT WE FOCUS ON SAFETY
- DECISION PROCESS INCLUDES:
  - Risk assessments
  - Compensatory measure availability
  - Thorough evaluation of scheduling options
  - Assessment of safety from a Unit 2 point of view
  - Use limited portion of allowed outage time (AOT)
- MAXIMIZE USE OF SCHEDULED SYSTEM/REFUELING OUTAGE WINDOWS
- PROCEDURAL CONTROLS UNDER DEVELOPMENT

## II. CONTROLS FOR VOLUNTARY ENTRY INTO UNIT 2 LCOs

- USED NRC INSPECTION MANUAL AND OTHER UTILITY PROCESSES FOR GUIDANCE
- MANAGEMENT CONTROLS/COMPENSATORY MEASURES
  - Target field work to 50% of AOT
  - Verify parts availability and work documents prepared
  - Verify/establish operability of redundant equipment
  - Work continuously
  - Overview by system engineer
  - Ensure low risk
  - Develop contingency plans
  - Management approval (including PORC and Plant Manager)
  - Monitor daily in plan-of-day (POD) meetings

### **III. IDENTIFICATION OF UNIT 3 ACTIVITIES IMPACTING UNIT 2 LCOs**

- **BACKGROUND**
  - LCO Impacts identified during workplan development
  - Workplans developed following design completion
  - System walkdowns often needed to identify impacts
- **MOST LCO IMPACTS IDENTIFIED**
  - Design changes 96% complete
  - Workplans 87% developed
- **ANTICIPATE FEW LCO IMPACTS REMAIN**

#### IV. DISCUSSION OF IDENTIFIED ACTIVITIES

- MOST ACTIVITIES SCHEDULED FOR EXISTING SYSTEM/REFUELING OUTAGE WINDOWS
- OPTIONS CAREFULLY EVALUATED
  - Work scope
  - Importance of work to safety
  - Scheduling options
  - Risk evaluation
  - Compensatory measures
- ENTER LCO ALLOWED OUTAGE TIME IF LOW RISK AND SAFETY BENEFIT
- TWO CATEGORIES OF ACTIVITIES IF WORK PERFORMED WHILE UNIT 2 OPERATING
  - NRC informed before work performed (Resident notification)
  - NRC approval required before work performed

## **IV. DISCUSSION OF IDENTIFIED ACTIVITIES (CONTINUED)**

- **EMERGENCY DIESEL/ELECTRICAL BOARD OUTAGES**
  - CRDR modifications - improves ability to operate equipment needed for Units 2 and 3
  - Affects emergency power supplies to standby gas treatment system (SBGTS), control room emergency ventilation system (CREVS), and reactor building refueling zone ventilation system.
  - Systems required during next refueling outage
  - Less operator impact if work performed on-line
  - Safety assessment shows low risk (0.35% change in core damage frequency)
  - Backup emergency power available through cross-tie
  - Residents informed
- **SHUTDOWN BOARD CONTROL POWER SUPPLY MODIFICATIONS**
  - Temporary extension to AOT
  - NRC approval required for technical specification change

## V. CLOSING REMARKS

- USED EXISTING GUIDANCE TO DEVELOP CONTROLS
- FOCUS ON SAFETY
- MOST ACTIVITIES SCHEDULED FOR PLANNED OUTAGES
- ENSURE LOW RISK IF WORK TO BE PERFORMED DURING UNIT 2 OPERATION
- ADEQUATE COMPENSATORY MEASURES
- MANAGEMENT APPROVAL AND INVOLVEMENT
- PROCEDURAL CONTROLS BEING ESTABLISHED

ENCLOSURE

**CONTROL OF UNIT 3 RECOVERY ACTIVITIES  
REQUIRING ENTRY INTO A UNIT 2 LCO**

- **TVA MEMORANDA REQUESTING PLANT MANAGER APPROVAL TO SCHEDULE MODIFICATIONS USING UNIT 2 LCOs**
- **LIST OF UNIT 3 MODIFICATIONS AFFECTING UNIT 2 LCOs**
- **PROPOSED GUIDANCE FOR VOLUNTARY ENTRY INTO UNIT 2 LCOs FOR MODIFICATIONS**
- **EMERGENCY AC POWER SYSTEM UNAVAILABILITY**

**TVA MEMORANDA  
REQUESTING PLANT MANAGER APPROVAL  
TO SCHEDULE MODIFICATIONS USING UNIT 2 LCOs**

February 24, 1994

R. D. Machon, POB 2C-BFN

BROWNS FERRY NUCLEAR PLANT (BFN) - SCHEDULING OF ELECTRICAL BOARD OUTAGES TO PERFORM MODIFICATIONS AND MAINTENANCE IN SUPPORT OF THE UNIT 3 (U3) RECOVERY (REVISION 1)

Purpose of Memorandum

The purpose of this memorandum is to inform you of the upcoming U3 electrical board outages and their impact on Unit 2 systems/components.

In the last several weeks, the plant scheduling organization has been working with various other plant organizations in developing electrical board/diesel generator outages to perform modifications and maintenance in support of U3 restart.

It has become apparent that because of the amount of work and testing to be performed, multiple outages must be taken within the same electrical division, in particular, the 4kv shutdown boards and diesel generators. Because of the Unit 2 (U2) requirements for Secondary Containment and Control Room Emergency Ventilation, several of the proposed outages will place us in a U2 Limiting Condition of Operation (LCO). Guidance on this issue is provided below.

NEC Guidance on Voluntarily Entering Technical Specification (TS) LCOs

Site Licensing was requested to ascertain whether there were any TVA commitments or NEC guidance on entering TS LCOs to perform a modification.

A search of the Corporate Commitment Tracking System (CCTS) found no formal commitments to NRC concerning voluntary entry into TS LCOs. However, the NRC Inspection Manual, Part 9900, provides guidance on voluntary entry into LCO Action Statements to perform Preventive Maintenance (PM). The NRC Inspection Manual states "Intentional Entry into an action statement of an LCO is not a violation of the TS except in certain cases, such as intentionally creating a loss of function situation or entering LCO 3.0.3. (i.e., BFN TS 1.C.1)." The NRC further states that a "licensee may take equipment out of service to perform PM during power operation of the facility if it expects the reliability of the equipment to improve such that the overall risk to safe operation of the facility should decrease."

R. D. Machon, POB 2C-BFN

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February 24, 1994

Thus, for each U2 LCO that will be impacted by U3 recovery activities, an assessment is required to determine whether that activity improves the equipment reliability and enhances safe operation of the plant. This assessment should discuss the need to perform the U3 recovery activity, its impact on the recovery schedule, the need to perform the activity while U2 is operating, and the specific U2 LCOs that will be entered. This assessment is provided below.

#### Justification

Attached is a listing of the proposed diesel generator and 4kv shutdown board outages, along with the work to be performed and allowable TS LCO. Appendix 'R' LCOs are not shown since appropriate fire watches will be maintained. The only activity listed in the attachment that will necessitate intentionally entering a U2 TS LCO is the work associated for DCN W17275 to support control room design review (CRDR) modification. The CRDR modifications enhance the operation of the facility by improving control room panel layouts and control room instrumentation. The CRDR modifications eliminate control room panel differences between units, and eliminate human engineering deficiencies associated with the operation of U3 diesel generators. The U3 diesel generators are needed for emergency power supply for the control room emergency ventilation, standby gas treatment (SBGT) system, and reactor building refueling zone ventilation. The current schedule for the next U2 refueling outage does not include a secondary containment outage. Therefore, delaying this work until the next U2 refueling outage, since affected components will be required operable at all times, has no benefit. The proposed outages must be complete for system operability to support core reload on U3.

As shown on the attachment, the planned U3 electrical board outages will necessitate voluntary entry of U2 TS LCO 3.9.D.2 due to the diesel generator outage which affects the 'C' train of the SBGT system. The work associated with DCN W19785 will be performed as part of the scheduled TS surveillance for the '3D' diesel generator. The proposed outage is scheduled to be completed within the allowable LCO action time. However, the work associated with replacement on panel 9-23 A, B, C, and D should be completed within seven days each. The basis for this TS indicate that the LCO action time is commensurate with the importance of the affected system when U3 is in cold shutdown, the low probability of a loss of cooling accident (LOCA)/loss of offsite power, and availability of onsite power to redundant trains.

R. D. Machon, POB 2C-BFN

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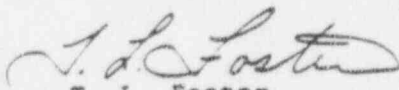
### Risk Assessment

The following is a risk assessment on removing the 3ED diesel generator from service. The risk significance of removing the 3ED Diesel Generator (DG) from service was determined by performing a sensitivity study using the BFN Probabilistic Risk Assessment (PRA) model. The BFN model includes the quantification of dynamic human actions by the use of performance shaping factors (PSFS). This methodology is based on the assumption that the likelihood of human error in a particular situation depends on the combined effects of PSFS that influence the ability of the operator to accomplish an action successfully. The PSFS used were: significant preceeding and concurrent actions; plant interface and indications; time available; required actions and procedural guidance; complexity of the action; training and experience relative to the action; and stress due to the situation and conditions. Values were obtained by completion of operator response forms and operator interviews. The model was modified such that the 3ED DG was guaranteed to be unavailable (failed). The result was a 4.2% increase in average yearly core damage frequency (CDF). Assuming a maximum outage time for the 3ED DG of thirty days, the risk significance of this specific event would be approximately a 0.35%  $(4.2\% \times (30/365))$  increase in core damage frequency.

This small increase (0.35%) above the base case is insignificant and well within the uncertainty bounds of the PRA.

### Conclusion

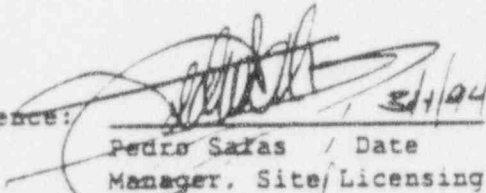
Therefore, based on the above assessment, it is concluded that the planned U3 electrical board outage will improve system reliability, thus enhancing overall facility safety. The voluntary entry into the U2 TS LCO will not have an adverse impact on the overall risk to safe operation of the facility.

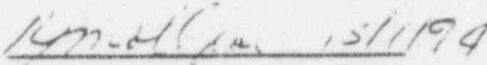
  
T. L. Foster  
Outage Manager  
POB 1G-BFN

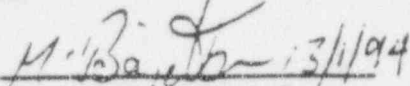
R. D. Machon, POB 2C-BFN

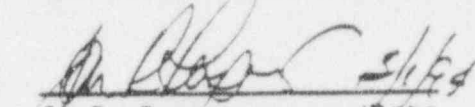
Page 4


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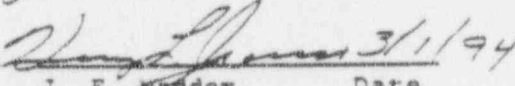
Concurrence:  3/1/94  
Pedro Safas / Date  
Manager, Site/Licensing

Concurrence:  3/1/94  
Eugene Preston, Jr./Date  
Operations Manager

Concurrence:  3/1/94  
Masoud Bejestani/Date  
Technical Support Manager

Concurrence:  3/1/94  
J. R. Rupert /Date  
Eng/Mods Manager

Concurrence:  3/1/94  
C. M. Crane /Date  
Maintenance Manager

Concurrence:  3/1/94  
J. E. Maddox Date  
Engineering Manager

JSH:SGS

Attachment

cc (Attachment):

RIMS, CST 13B-C

PLCUT303/17/202

PROPOSED OUTAGES

PROPOSED DATE	OUTAGE	WORK TO BE PERFORMED	LCO	COMMENTS
05/16/94	3EC Dsl Generator	W17275 Stage 1 CRDR	None	3B DG Must Remain Operable
06/13/94	3ED Dsl Generator	W17275 Stage 2 CRDR	30 Days TS 3.9.D.2	C Train of SBT 4kv SD 3ED Will Remain Operable
06/27/94	3EA Dsl Generator	W17275 Stage 3 CRDR	None	
07/25/94	3EB Dsl Generator	W17275 Stage 4 CRDR Bi-Annual SI 3-SI-4.9.A.1.d (3B)	None	3C DG Must Remain Operable
12/12/94	3A 4kv Unit Board 3EA 4kv SD BD 3EB 4kv SD BD	93-13318-00 Fuse Block W21284 Stg 2 Load Shed W19785 Stg 5 W21284 Stg 6 W21284 Stg 8 W19785 Stg 6 HFA Relay Replacement Work Orders	None	All Loads Must Be Transferred From 480v SD BD 3A To 3B (3A 480v SD BD will be out of service due to normal and alternate power supply unavailable)
11/28/94	3ED Dsl Generator 3ED 4kv SD BD	W19785 Stg 8, HFA Relay Replacement Work Orders Bi-Annual SI 3-SI-4.9.A.1.d (3D)	7-Days TS 3.9.D.1.a TS 3.7.B.3	C Train of SBT
01/09/95	3EA Dsl Generator	Bi-Annual SI 3-SI-4.9.A.1.d (3A)	None	
01/25/95	3EC Dsl Generator 3EC 4kv SD BD	Bi-Annual SI, PMT 24.001 3-SI-4.9.A.1.d (3C) W19785 Stg 7, HFA Relay Replacement Work Orders	None	3B DG Must Remain Operable

April 13, 1994

Eugene Preston, Jr., POB 2C-BFN

BROWNS FERRY NUCLEAR PLANT (BFN) - VOLUNTARY ENTRY INTO UNIT 2 (U2) TECHNICAL SUPPORT LIMITING CONDITION FOR OPERATIONS (LCOs) TO PERFORM CONTROL ROOM DESIGN REVIEW (CRDR) MODIFICATIONS IN SUPPORT OF UNIT 3 (U3) RECOVERY ACTIVITIES

Reference:

Memorandum from T. L. Foster to R. D. Machon dated

February 24, 1994, "Scheduling of Electrical Board Outages to Perform Modifications and Maintenance in Support of the U3 Recovery" (Revision 1) (R59 940224 864)

Purpose of Memorandum

The purpose of this memorandum is to inform you of the upcoming CRDR modifications and their impact on U2 systems/components. Specifically, modifications are planned to the Containment Atmosphere Dilution (CAD) panels in the U3 control room to make them consistent with the layout in the U2 control room. Because of the U2 requirements for CAD, the planned modifications will place us in a U2 LCO. Guidance on this issue is provided below.

NRC Guidance on Voluntarily Entering Technical Specification (TS) LCOs

The referenced memorandum noted that the NRC Inspection Manual provides guidance for the voluntary entry into a LCO action statement. Per this guidance, for each U2 LCO that will be impacted by U3 recovery activities, an assessment is required to determine whether that activity improves the equipment reliability and enhances safe operation of the plant. The following assessment discusses the need to perform the U3 recovery activity, its impact on the recovery schedule, the need to perform the activity while U2 is operating, and the specific U2 LCOs that will be entered.

Justification

The attachment list the proposed CAD system outages, the work to be performed, and the applicable TS LCOs. These activities will not require entry into any Appendix R LCOs. The proposed modifications are part of the U3 CRDR modifications. These modifications will relocate handswitches and indicators in the U3 control room to make them consistent with U2. The CRDR modifications enhance the operation of the facility by improving control room panel layouts, and control room instrumentation. These modifications eliminate control room panel differences between units, and eliminate human engineering deficiencies associated with the operation of the CAD systems. The proposed outages must be complete for system operability to support core reload of U3.

Eugene Preston, Jr.  
Page 2  
April 13, 1994

As shown in the attachment, the work associated with design change notice DCN W17215 will necessitate voluntary entry of U2 TS LCO 3.7.G.3 due to modifications affecting the CAD system. Only one of the two trains at a time will be taken out of service. The modifications for each train are scheduled to be completed well within the allowable LCO action time (i.e., 30 days). The LCO action times are commensurate with the safety significance of the systems and availability of redundant trains.

#### Risk Assessment

The proposed removal from service of the CAD during the LCO associated with the upcoming performance of modifications will not result in an increase in the Core Damage Frequency (CDF). The function of this system is to mitigate, not prevent core damage. The CAD system was not modeled in the current Level I Plant Model. Therefore, the removal of these systems from service during the proposed modification will have no impact on the CDF.

#### Conclusion

Based on the above assessment, it is concluded that the planned CRDR modifications to the CAD system will improve system reliability and enhance overall facility safety. The voluntary entry into the U2 TS LCOs will not have an adverse impact on the overall risk to safe operation of the facility.

W. W. Banks  
Unit 3 Outage Manager  
POB 2G-BFN

PLOUT303/17/117

Eugene Preston, Jr.

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April 13, 1994

Concurrence: \_\_\_\_\_ /  
Pedro Salas / Date  
Manager, Site Licensing

Concurrence: \_\_\_\_\_ /  
R. J. Moll /Date  
Operations Manager

Concurrence: \_\_\_\_\_ /  
Masoud Bajestani/Date  
Technical Support Manager

Concurrence: \_\_\_\_\_ /  
J. R. Rupert /Date  
Engineering/Materials Mgr.

Concurrence: \_\_\_\_\_ /  
J. E. Maddox /Date  
Maintenance/Modifications Manager

Concurrence: \_\_\_\_\_ /  
K. D. Stinson /Date  
Unit 3 Recovery Manager

WWB:SGS

Attachment

cc (Attachment):

RIMS, CST 13B-C

PLOUT303/17/118

# ATTACHMENT

The CRDR project is working toward a targeted completion of June 30, 1994. Completion of the DCN stages listed below will require equipment currently in service to be taken out of service for modification, testing, and DCN return to operation. In some cases this will necessitate pulling up preparation and performance of test instructions and other DCN impacts from their currently scheduled dates. Some of these will require entry into LCOs to accomplish.

W17215	Stage 3	3-PMT-BF-084.001, 0-SI-4.2.F-14A, 3-SI-3.2.10.Q, LCI-0-F-84-007, LCI-0-P-84-006, LCI-0-T-84-027, CCI-3-TS-84-031
W17215	Stage 4	3-PMT-BF-084.004, 0-SI-4.2.F-14B, 3-SI-3.2.10.Q, LCI-0-F-84-018, LCI-3-F-84-019, LCI-0-P-84-017, LCI-0-T-84-028, LCI-3-F-84-020, CCI-3-TS-84-032, CCI-3-PS-84-021

ATTACHMENT

PROPOSED OUTAGES				
PROPOSED DATE	OUTAGE	WORK TO BE PERFORMED	LCO	COMMENTS
04/25/95	'A' CAD	W171215 STG 3	30 Days TS 3.7.G.3	'B' CAD Must Remain Operable
05/02/94	'B' CAD	W171215 STG 4	30 Days TS 3.7.G.3	'A' CAD Must Remain Operable

PLOUT303/17/120

**LIST OF UNIT 3 MODIFICATIONS  
AFFECTING UNIT 2 LCOs**

### UNIT 3 MODIFICATIONS AFFECTING UNIT 2 LCOs

DESCRIPTION OF ACTIVITY	DISPOSITION
D/G '3D' CONTROL ROOM DESIGN REVIEW (CRDR) MODIFICATION TO PANEL 9-23	PLAN TO ENTER 30 DAY TS LCO
* 480V SHUTDOWN BOARD '3B' TRANSFER SWITCH MODIFICATION	PLAN TO ENTER 7 DAY TS LCO
* 480V RMOV BOARD '3B' REPLACEMENT FEEDER CABLE	PLAN TO ENTER 7 DAY TS LCO
4KV SHUTDOWN BOARD '3ED' APPENDIX R CIRCUIT ISOLATION (ISOL) MODIFICATIONS, UNDER VOLTAGE RELAY MOD, COMMON ACCIDENT SIGNAL (CASA) MODS, TSGIA TRANSFORMER MODS	PLAN TO ENTER 7 DAY TS LCO (CONCURRENT WITH D/G ANNUAL OUTAGE)
CRDR MODS ON CONTAINMENT AIR DILUTION (CAD) SYSTEM	REFUELING OUTAGE
REPLACE CABLES/SPLICE/TERM BLOCK AT 3-FSV-75-24	REFUELING OUTAGE
D/G'A' APPENDIX R CIRCUIT ISOL MODS	DIESEL SYSTEM OUTAGE
D/G'B' APPENDIX R CIRCUIT ISOL MODS	DIESEL SYSTEM OUTAGE
D/G'C' APPENDIX R CIRCUIT ISOL MODS	DIESEL SYSTEM OUTAGE
D/G'D' APPENDIX R CIRCUIT ISOL MODS	DIESEL SYSTEM OUTAGE
4 KV SHUTDOWN BOARD 'A' APPENDIX R CIRCUIT ISOLATION MODS	REFUELING OUTAGE
4 KV SHUTDOWN BOARD 'C' APPENDIX R CIRCUIT ISOLATION MODS	REFUELING OUTAGE
4 KV SHUTDOWN BOARD 'D' APPENDIX R CIRCUIT ISOLATION MODS	REFUELING OUTAGE
D/G 'A' CASA MODS	REFUELING OUTAGE
D/G 'B' CASA MODS	REFUELING OUTAGE
D/G 'C' CASA MODS	REFUELING OUTAGE
D/G 'D' CASA MODS	REFUELING OUTAGE
* ONE LCO FOR BOTH MODS	

**PROPOSED GUIDANCE FOR VOLUNTARY ENTRY  
INTO UNIT 2 LCOs FOR MODIFICATIONS**

VOLUNTARY ENTRY INTO A LIMITED CONDITION OF OPERATION (LCO)  
FOR  
PLANT MODIFICATIONS

- I. Planning for any modification(s) activity on plant components or systems that require entry into an LCO shall have the following:
  - review by, and concurrence from affected section(s),
  - review by Plant Operations Review Committee (PORC), and
  - approval of the Plant Manager prior to entry into the LCO.
- II. Field work activities that require voluntary entry into an LCO shall be planned not to exceed 50% of the Allowable Outage Time (AOT) before beginning post modification testing.
- III. Contingency plans shall be considered and documented addressing the actions to be taken should it be determined that the LCO planned AOT timeframe will be exceeded.
- IV. Prior to entering into the LCO for modifications, the performing organization(s) will verify:
  - a. controlling documents have been prepared and reviewed, and
  - b. required materials are available and pre-staged.
- V. Continuous shift coverage shall be established to complete the modifications, maintenance, testing and closure of the documentation required to return the component or system to operable status in the minimum possible time.
- VI. The Operations organization will establish and control the operability of redundant equipment or systems and control all other activities that could challenge the operability of the redundant equipment supporting the LCO.
- VI. System Engineering shall monitor the progress of the activity to assure the equipment is returned to operable status in the planned amount of time.

# VOLUNTARY ENTRY INTO A LIMITED CONDITION FOR OPERATION (LCO) FOR PLANT MODIFICATIONS

## SECTION 1

Reference Technical Specification/LCO: \_\_\_\_\_  
 Safety Related (SR) Structures, Systems or Components (SSC) To Be Taken Out of  
 Service (Reference SSP-3.3): \_\_\_\_\_

Proposed Start Date and Time: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Estimated LCO Clearance Date and Time: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Estimated Preparation Time: \_\_\_\_\_  
 Estimated Repair Time: \_\_\_\_\_  
 Estimated Return To Service Testing Time: \_\_\_\_\_  
 Total LCO Duration: \_\_\_\_\_  
 Estimated % of Tech Spec Allowable LCO Duration: \_\_\_\_\_  
 Tech Spec Action(s) Required IF LCO Is Not Met: \_\_\_\_\_

NRC Notification: YES/NO \_\_\_\_\_  
 Work Groups Required to Support LCO Activities: \_\_\_\_\_  
 Describe the Scope of the Activity Which Requires the Voluntary Entry Into a  
 LCO: \_\_\_\_\_

## SECTION 2

YES NO

Will the SSC unavailability adversely impact other SSCs in  
 performing their safety function? Explain: \_\_\_\_\_

Is there a more preferable plant condition to perform this  
 work when the SSC could be removed from service that would  
 not require a LCO? Explain: \_\_\_\_\_

Is there a more preferable time or plant condition to perform  
 this work that would provide a greater degree of safety?  
 Explain: \_\_\_\_\_

Are there any concerns with regard to resources (i.e., craft  
 and technical support, parts, tools, and services other than  
 those available on site) Explain: \_\_\_\_\_

Is multiple group support and interfacing required? Include  
 consideration that various activities may be performed by  
 multiple groups. Explain: \_\_\_\_\_

Will performance of this work create a changed risk or  
 challenge to the SSC? (A 10CFR50/59 screening may be  
 required) Explain: \_\_\_\_\_

### SECTION 3

Describe the basis and net safety benefit for entering the LCO. All questions answered with a "YES" must be addressed. Attach this form to a safety evaluation if required.

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Prepared By: \_\_\_\_\_

Concurrence - Operations	_____	Date: _____
Concurrence - PORC	_____	Date: _____
Concurrence - Work Control Supv	_____	Date: _____
Concurrence - Support Group(s)	_____	Date: _____
	_____	Date: _____
	_____	Date: _____

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Entry into an LCO to perform the activity described above is authorized.

Plant Manager: \_\_\_\_\_ Date: \_\_\_\_\_

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Complete this portion when the activity is performed.

LCO Entered - SOS	_____	Time: _____	Date: _____
LCO Terminated - SOS	_____	Time: _____	Date: _____

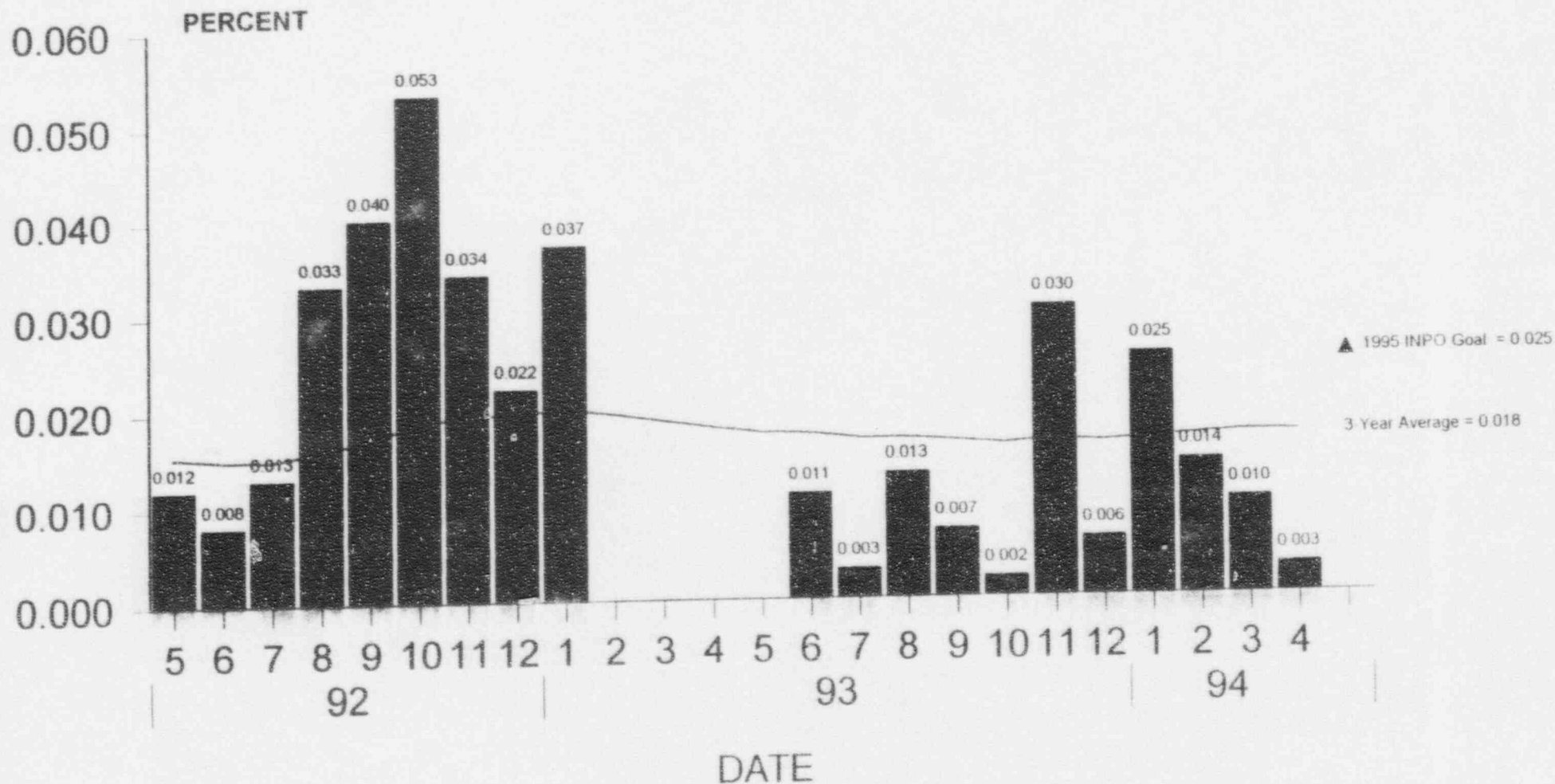
PLOUT303/37/3

## EMERGENCY AC POWER SYSTEM UNAVAILABILITY

# BROWNS FERRY NUCLEAR PLANT

## SAFETY SYSTEM PERFORMANCE

### EMERGENCY AC POWER SYSTEM UNAVAILABILITY



■ Percent  
— 3-Year Average  
▲ 1995 INPO Goal = 0.025