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	ENCLT . FO	N NBR:9107120243 D-260 Browns Ferry AME AUTHOR A S.A. Tennessee E,O.J. Tennessee NAME RECIPIEN	Nuclear D	: 91/07/05 NOTARIZE ower Station, Unit 2 N Ithority Ithority FION	D: NO , Tennessee	DOCKET # 05000260	•
•	•	following loss of error.Corrective personnel & proce	acitions adure revis	ch spec violation oc containment.Caused b include training for sions.W/910705 ltr.	y personnel plant		•
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Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609

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

July 5, 1991

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

Dear Sir:

TVA - BROWNS FERRY NUCLEAR PLANT (BFN) UNIT 2 - DOCKET NO. 50-260 -FACILITY OPERATING LICENSE DPR-52 - REPORTABLE OCCURRENCE REPORT BFR0-50-260/91013

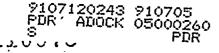
The enclosed report provides details concerning a technical specification violation that occurred following the breach of primary containment that occurred when both drywell airlock doors were simultaneously open. This report is submitted in accordance with 10 CFR 50.73(a)(2)(i).

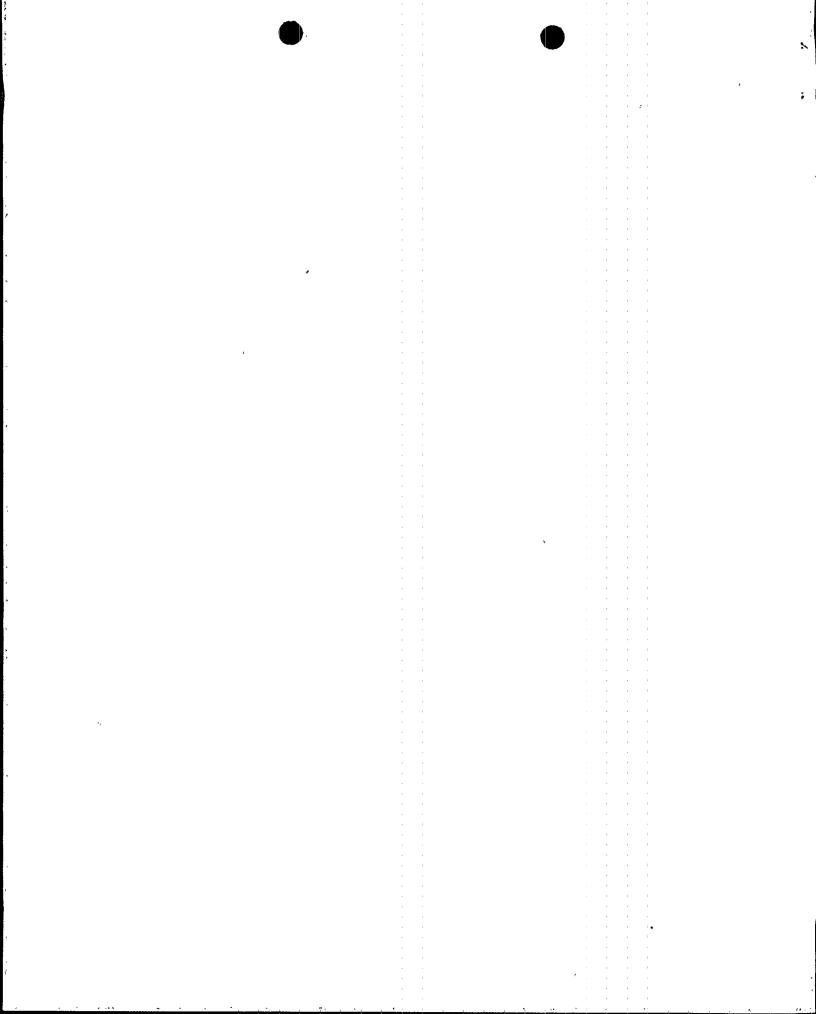
Very truly yours,

TENNESSEE VALLEY AUTHORITY

'AUL Zèringue

Enclosure cc: see page 2





U.S. Nuclear Regulatory Commission July 5, 1991

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cc (Enclosure): INPO Records Center Suite 1500 1100 Circle 75 Parkway Atlanta, Georgia 30339

NRC Resident Inspector, BFN

Regional Administration U.S. Nuclear Regulatory Commission Office of Inspection and Enforcement Region II 101 Marietta Street, Suite 2900 Atlanta, Georgia 30323

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

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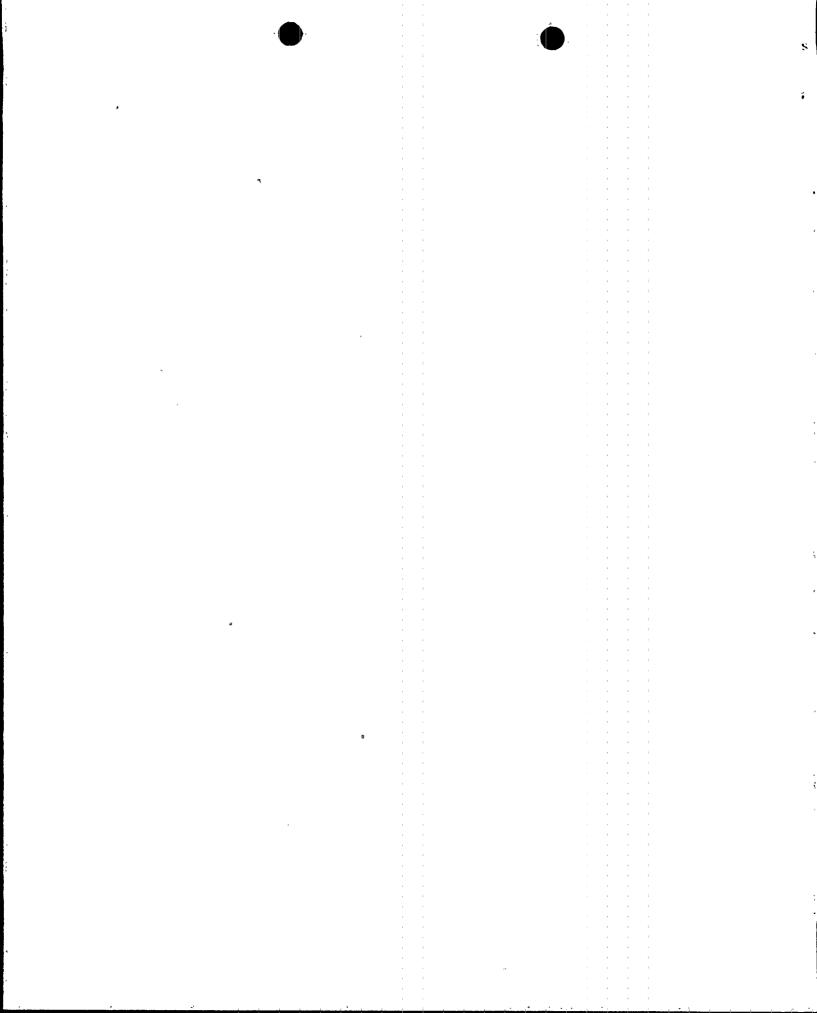
NRC Form 366 U.S UCLEAR REGULATORY COMMISSION Approved OMB No. 3150-0104
(6-89) Expires 4/30/92
LICENSEE EVENT REPORT (LER)
FACILITY NAME (1)
Browns Ferry Unit 2 0150000 21 61 0110F1 01 6
TITLE (4)
Technical Specification Violation Following Loss of Primary Containment Caused by Personnel Error EVENT DAY (5) LER NUMBER (6) REPORT DATE (7) OTHER FACILITIES INVOLVED (8)
EVENT DAY (5) LER NUMBER (6) REPORT DATE (7) OTHER FACILITIES INVOLVED (8) I I I SEQUENTIAL I REVISION I FACILITY NAMES IDOCKET NUMBER(S)
MONTH DAY IYEAR YEAR NUMBER NUMBER MONTH DAY YEAR
OPERATING THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:
MODE (Check one or more of the following)(11)
(9) N 20.402(b) 20.405(c) 50.73(a)(2)(iv) 73.71(b)
POWER 20.405(a)(1)(i) 50.36(c)(1) 50.73(a)(2)(v) 73.71(c)
LEVEL 20.405(a)(1)(ii) 50.36(c)(2) 50.73(a)(2)(vii) OTHER (Specify in
(10) 0 0 0 20.405(a)(1)(iii) X 50.73(a)(2)(i) 50.73(a)(2)(viii)(A) Abstract below and in
[20.405(a)(1)(iv) [50.73(a)(2)(ii) [50.73(a)(2)(viii)(B)] Text, NRC Form 366A)
$\frac{\left[20.405(a)(1)(v)\right]}{\left[50.73(a)(2)(iii)\right]} \frac{\left[50.73(a)(2)(x)\right]}{\left[50.73(a)(2)(x)\right]}$
LICENSEE CONTACT_FOR_THIS_LER_(12)
NAME TELEPHONE NUMBER
Stewart A. Wetzel, Compliance Licensing Engineer 205729-2048
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)
CONFLETE ONE LANE FOR LACH CONFIGNATION FACORE DESCRIPTED AN INTO NE ON THE CONFLETE ONE CONFIGNATION OF THE CONFIGNATION O
CAUSE SYSTEM COMPONENT MANUFACTURER TO NPRDS CAUSE SYSTEM COMPONENT MANUFACTURER TO NPRDS
SUPPLEMENTAL REPORT EXPECTED (14) EXPECTED MONTH DAY YEAR
X YES (IF yes, complete EXPECTED SUBMISSION DATE) NO DATE (15) 0 8 0 5 9 1
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)
On June 5, 1991 at approximately 0245 a loss of primary containment integrity
occurred when both drywell personnel airlock doors were opened. This condition
occurred after the interlock which prevents both doors from being simultaneously
open was disarmed.
The root cause of this event was personnel error. The individual involved (utility,
non-licensed) performed unauthorized work by disarming the interlock on the drywell
airlock. A contributing cause of this event was the lack of action taken by those
in the direct area when the event took place.
TVA's corrective actions to address the specifics of this event included general and
specialized training for plant personnel, procedure revisions to ensure Operations
personnel are responsible for the operation of the drywell doors, and personnel
corrective action in accordance with TVA policy. In addition, TVA performed an
independent review to identify areas in which improvements may be prudent to further
enhance maintenance-related activities and to reinforce requisite operational
attitudes. This review resulted in additional procedure revisions, guidelines to
enhance pre-test briefings and identification of future training upgrades.

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NRC Form 366A (6-89)	U.S. CLEAR REGULATORY COMMISSION	 Approved OMB No. 3150-0104 Expires 4/30/92
	LICENSEE EVENT REPORT (LER)	
· ·	TEXT CONTINUATION	

FACILITY NAME (1)	DOCKET NUMBER (2) LER NUMBER (6)	PAGE (3)
	SEQUENTIAL REVISION	
	YEAR NUMBER NUMBER	
Browns Ferry Unit 2		0 2 0 F 0 6

TEXT (If more space is required, use additional NRC Form 366A's) (17)

DESCRIPTION OF EVENT

On June 5, 1991 at approximately 0245 a loss of primary containment integrity occurred when both drywell personnel airlock doors were opened. This condition occurred after the interlock which prevents both doors from being simultaneously open was disarmed.

During the power ascension test program, entries were required to verify proper thermal expansion of primary system piping. This testing was to be performed under Test Instruction (TI) 190, <u>System Thermal Expansion</u>, with reactor coolant system pressure at approximately 150 psig. Mechanical Maintenance craftsmen were designated to operate the drywell airlock doors. These individuals were the assigned and qualified personnel to perform this task.

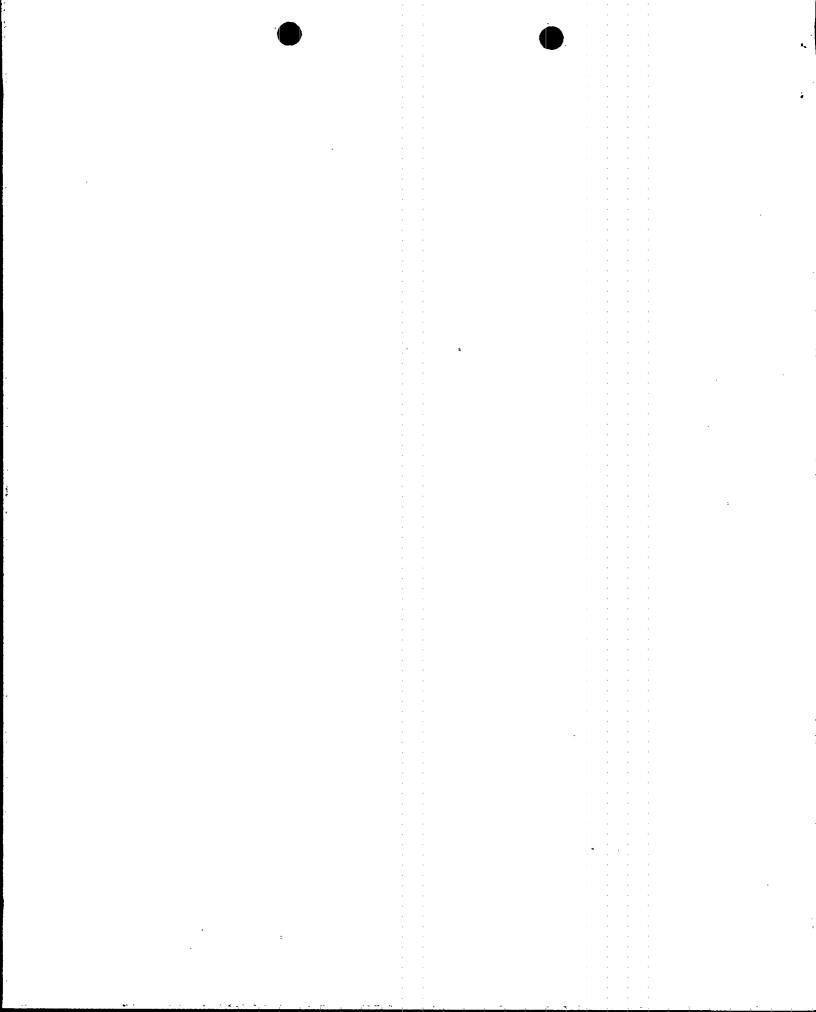
At approximately 0040 on June 5, 1991 three Mechanical Maintenance craftsmen were dispatched to perform the task of operating the airlock doors to support the thermal expansion testing. After supporting three entries into the drywell to determine the radiological conditions, a brief discussion took place between one of the three maintenance craftsmen and a Radiological Controls technician. Based on this discussion the craftsman understood it was acceptable to defeat the airlock interlock and open both inner and outer doors, providing an unobstructed pathway into the drywell. After defeating the airlock interlock, the craftsman reported his action to his foreman and general foreman. These individuals also did not question this action and failed to notify the Shift Operations Supervisor (SOS).

The condition of a breached primary containment remained in place until approximately 0600 on June 5, 1991, when the status of the airlock was questioned and the condition reported to the SOS. Following this notification the SOS took appropriate actions and reestablished primary containment integrity.

At the time of this event Unit 2 was in the startup mode with reactor moderator temperature of 365 degrees Fahrenheit and reactor vessel pressure of 150 psig. No fuel handling or operations over spent fuel were in progress. The loss of primary containment is a violation of Technical Specification 3.7.A.2, which is reportable in accordance with 10 CFR 50.73(a)(2)(i).

ANALYSIS OF EVENT

TVA is performing an assessment of the safety significance of this event. The results of this assessment will be reported in a revision to this LER.



NRC Form 366A	U.S. CLEAR REGULATORY COMMISSION	Approved OMB No. 3150-0104
(6-89)	-	Expires 4/30/92
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Browns Ferry Unit 2			0 3 0F 0 6
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

CAUSE OF EVENT

The root cause of this event was personnel error. The Mechanical Maintenance craftsman (utility, non-licensed) performed unauthorized work by disarming the interlock on the drywell airlock. Prior to this act the craftsman had received no direction from his supervisor or the SOS to perform this task. In addition, the craftsman did not have written authorization allowing him to perform this work. A contributing cause of this event was the lack of action taken by those in the direct area when the event took place.

PREVIOUS SIMILAR EVENTS

There have been no previous occurrences of loss of primary containment integrity.

CORRECTIVE ACTIONS

Corrective actions have been implemented in several areas to address the specifics of this event. The areas and their respective corrective action(s) are provided below.

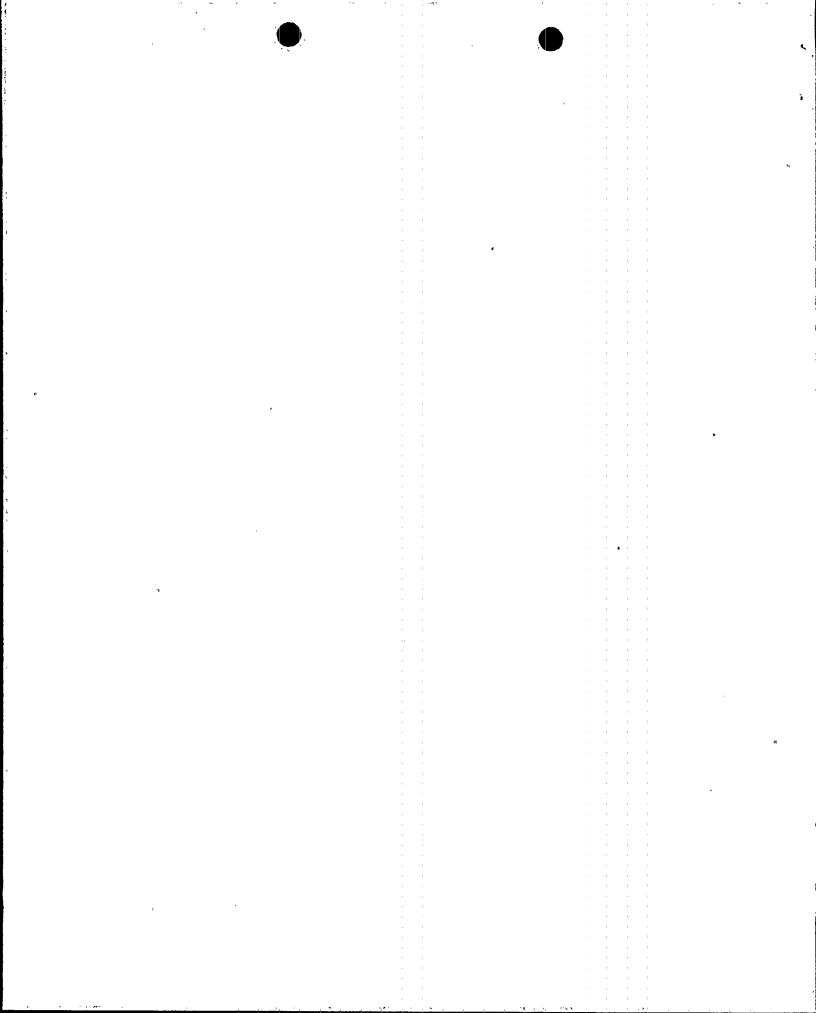
1. <u>Verbal Communication</u> - Without proper authorization, the maintenance craftsman modified the assigned scope of work. The foreman and general foreman failed to communicate to the SOS the scope change of the work activity after becoming aware of it.

<u>Corrective Actions</u> - Plant management developed an operating plant philosophy training package and conducted employee training sessions for plant personnel from June 7 through June 12, 1991. These sessions provided final event déscription; plant personnel responsibilities; SOS responsibility/authority; attitude and response to issues; and specific examples of previous events involving poor foreign material control, failures to perform adequate self-verification and problems associated with configuration control and equipment manipulation.

2. <u>Work Practices</u> - The craftsman defeated the interlocks without proper authorization and work documentation as required by plant procedures.

<u>Corrective Action</u> - In addition to the training described in item 1 above, TVA has trained maintenance craft and craft supervision on the requirements for the performance and documentation of assigned work. TVA will also provide more in-depth training and will include this type of training in the craft annual regualification certification.

3. <u>Procedure Change Evaluation</u> - Risks and consequences associated with changing the method of defeating interlocks were not adequately reviewed or assessed for applicability during a 1987 revision of the procedure for defeating the interlocks.



NRC Form 366A (6-89)	U.S CLEAR REGULATORY COMMISSION	Approved OMB No. 3150-0104 Expires 4/30/92
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FACILITY NAME (1) Browns Ferry Unit 2	 <u> </u>	LER NUMBER (6) PAGE (3) SEQUENTIAL REVISION NUMBER NUMBER NUMBER O 1 3 0 0 0 4 0 6
Corrective Actions Operations personne Maintenance instruct ensure correct dryw the interlocks defe of the drywell airl procedures to ensur completed. Based of to improve communic 4. Managerial Methods	- Prior to this event, plant managem	he drywell doors. ks have been revised to in the control room with nd authority of operation eview of over 2000 plant erly controlled has been edures are being revised ent had met with plant
BFN is becoming an specification and o included emphasis o taken; ensure each failures occur, ens self-checking). Se (e.g., Operational conducted to assess significant improve sustained emphasis desired levels of e	l occasions to emphasize the important operating plant, including the incre- perating requirements which would be on correct job performance (e.g., ens- activity is clearly understood, if ne- ure proper actions are taken to deter everal in-house assessments, including Readiness Review, Senior Management the readiness of personnel to resum- ments were noted, management recogni- and actual operating performance wou excellence. Frequent management asses initial operations.	ased technical in effect. Discussions ure adequate time is ot, stop; if equipment rmine root cause; g independent reviews Assessment) were e operations. While zed that continuous, 1d be necessary to obtain
personnel. Site Qu effectiveness of th provided in the mai enhanced its progra	- Training as discussed in item 1 ab mality Assurance (QA) performed surve his training. Based on these surveys intenance area. In addition, the sit an on the requirements of the plant's maintain their effectiveness.	ys to determine the , additional training was e Training department has
5. <u>Inappropriate Perso</u> work in violation o	onnel Action - The personnel involved of plant procedures.	performed unauthorized
<u>Corrective Action</u> - action in accordance	- The personnel involved have receive e with TVA policy.	d personnel corrective
areas in which improven activities and to reinf	ement performed an independent review ments may be prudent to further enhan Force requisite operational attitudes the comprehensive set of improvements	. This review resulted

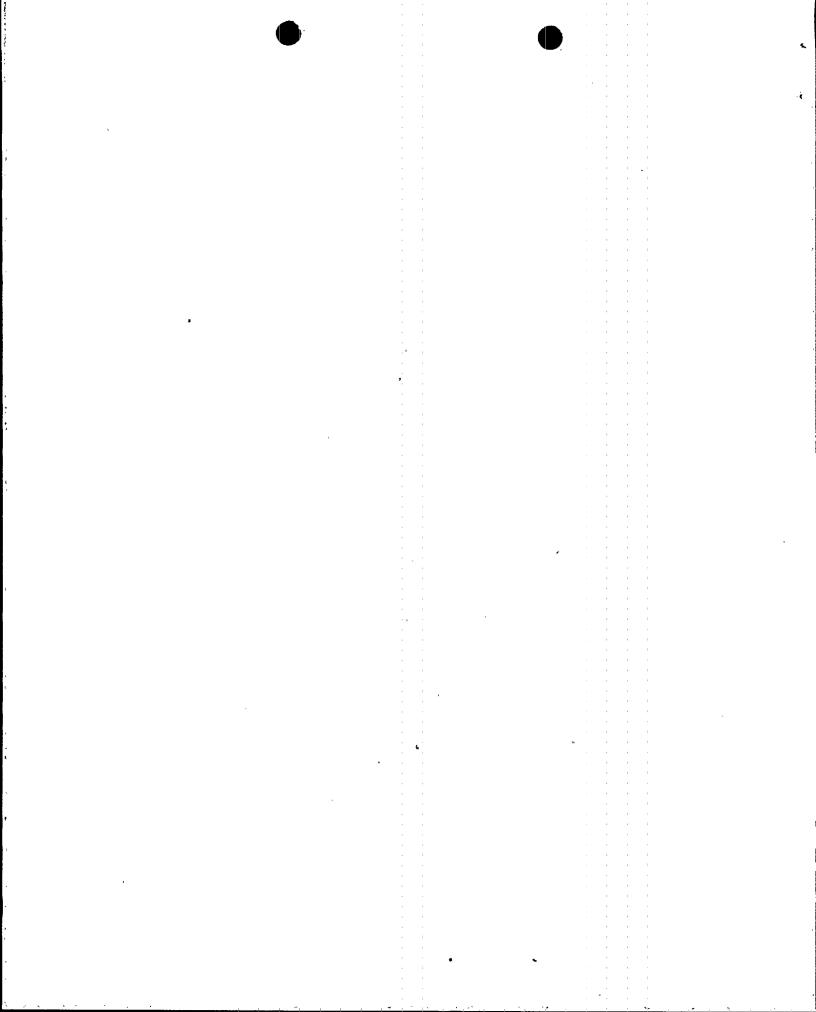
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Browns Ferry Unit 2	0151010101 21 61 01 91 1	<u> 0 1 3 0 0 0 5 0 0 6</u>
TEXT (If more space is	required, use additional NRC Form 366A's) (17)	• * .
Director's Star contained adequ prior to commen the process for Specifically, i order (WO) any SOS and unit op revised to refi	sion - The plant instruction governing we ndard Practice (SDSP) 7.6, <u>Maintenance M</u> wate controls to ensure operations notify incing work. The procedure has, however, r notifying Operations of the status of it has been revised to ensure that if du significant delays (over four hours) and perator are notified. The work planner' lect this enhancement. In addition, for ms, a "red sheet" must be filled out and ge as a flag to alert craftsmen of poter hs.	Management System, fications and authorization , been enhanced to improve in-progress work. uring performance of a work nd scope changes occur, the 's guide has also been r work that affects certain d inserted in the front of
SOS turnover me <u>Turnover Check</u> attend the shif listing of powe shift. Also, 1	5 - To ensure proper attendance and info eetings, General Operating Instruction 3 <u>list</u> , was revised to clearly identify th ft turnover. The turnover checklist was er ascension tests that would be carried the checklist now requires the listing o oming shift receives a briefing on the w progress.	300-1, Attachment A, <u>SOS</u> he individuals scheduled to s also revised to include a d over into the oncoming of prejob briefings to
were identified revealed that Operations not needed to be c resulted from o have adequate a	e site QA organization performed a revie d where Operations notifications were no 12 of the WOs required minor changes or ifications were being provided, and 14 W losed or canceled. TVA determined that execution of these work orders. The rem scope and work controls. QA also indeper res discussed previously in Item 3, Prov	ot being made. The review improvements in the way WOs were unnecessary and no problems would have maining WOs were found to endently reviewed over 700
been issued to requirements for guidelines requirements test is perform of the test be pretest briefing test overview, prior to commended	ngs - To enhance the conduct of job brid test directors to reemphasize compliant or conducting briefings for power ascens uire that pretest briefings be held on a med; that personnel directly or indirect present at the briefings; and that the ngs: one prior to the test crew assumin usually at the Operations shift turnove ncing the test (a detailed briefing).	ce with procedural sion testing. These the shift during which the tly involved in performance test director conduct two ng shift duties (a general er meeting) and a second Briefings will ensure the
have been addrube satisfactor	<u>tion Training</u> - To ensure that required essed, TVA reviewed the task qualificat: y. In addition, QA will monitor the imp ongoing basis to evaluate the adequacy a	ion process and found it to plementation of this

NRC Form 366(6-89)

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Browns Ferry Unit 2 0150000 21 61 0 91 1 0 1 3 - 0 0	
TEXT (If more space is required, use additional NRC Form 366A's) (17)	
6. <u>Power Ascension Test Review</u> - To ensure that support activities are comple specified and documented, TVA reviewed the power ascension tests. Ninetee tests were reviewed; seven of which were improved.	tely n
7. <u>Shift Technical Advisor (STA) Training</u> - TVA reviewed the current STA trai program, which includes senior reactor operator qualification, and found i adequately covers primary containment requirements. Interviews with indiv STAs found them knowledgeable of these requirements.	t
8. <u>Foreman Qualification Evaluation</u> - TVA is developing a continuing supervis training program which foremen will attend.	ory
 <u>Access Levels</u> - To ensure that only individuals requiring access to plant obtain the applicable access level, TVA reviewed access levels of site per and changed the level of 108 individuals. 	areas sonnel
10. <u>Review of Critical Activities</u> - To ensure proper control by Operations, TV reviewed other critical activities, such as those related to fire protecti radiation monitors, and high radiation doors. No deficiencies were identi	on,
11. <u>Secondary Containment Interlocks</u> - To preclude a similar event from occurr BFN's secondary containment airlocks, TVA checked secondary containment interlocks and verified proper functionality.	ing on
12. <u>Maintenance Management Structure</u> - To ensure that BFN has an optimum Maint management organization, TVA will evaluate the existing two-level Maintena supervisory structure.	enance Ince
TVA's June 13, 1991 letter from D. A. Nauman to S. D. Ebneter previously commito perform these corrective actions.	tted
COMMITMENTS	
TVA will perform an assessment of the safety significance of this event. The results of this assessment will be reported in a revision to this licensee ever report. This revision should be submitted by August 5, 1991.	ent
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