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J. L. Wilson  
Vice President, Sequoyah Nuclear Plant

March 16, 1992

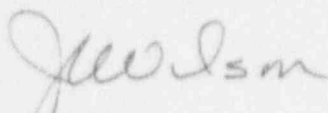
U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 2 - DOCKET  
NO. 50-328 - FACILITY OPERATING LICENSE DPR-79 - LICENSEE EVENT REPORT  
(LER) 50-328/92002

The enclosed LER provides details concerning an entry into Limit  
Condition for Operation 3.0.3 as a result of inoperable level indication  
for the No. 2 cold leg accumulator. This event is being reported in  
accordance with 10 CFR 50.73(a)(2)(i)(B) as an operation prohibited by  
technical specifications.

Sincerely,

  
J. L. Wilson

Enclosure  
cc: See page 2

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U.S. Nuclear Regulatory Commission  
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cc (Enclosure):

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## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

DOCKET NUMBER (2) | PAGE (3)

Sequoyah Nuclear Plant, Unit 2

01501013 12 18 1101 01 6

TITLE (4) Limiting Condition for Operation 3.0.3 Entry Because of Inoperable Number 2 Cold Leg

Accumulator Level Indication.

EVENT DAY (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)			
			SEQUENTIAL	REVISION				FACILITY NAMES			DOCKET NUMBER(S)	
MONTH	DAY	YEAR	NUMBER	NUMBER	MONTH	DAY	YEAR					
01	21	59	29	2	00	02	00	03	11	69	2	01501013 11
OPERATING MODE (9)   THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:												
(Check one or more of the following)(11)												
POWER LEVEL (10)			20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)
			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)			73.71(c)
			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)			OTHER (Specify in
			20.405(a)(1)(iii)			XX 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)
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
J. W. Proffitt, Compliance Licensing	6115843-6651

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

EXPECTED MONTH DAY YEAR

SUBMISSION

DATE (15)

YES (If yes, complete EXPECTED SUBMISSION DATE) | X | NO

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On February 15, 1992, at 0942 Eastern standard time, Limiting Condition for Operation (LCO) 3.0.3 was entered upon loss of level indication for the No. 2 cold leg accumulator. Maintenance activities were being performed on one loop of level instrumentation when the electrician performing the activities shorted across the bistable card input leads causing the feeder breaker to trip. The opening of the breaker resulted in a loss of power to the other level indicator. The cause of the event was the result of failure to follow the work instruction. The breaker was reset and the LCO exited. The individuals involved with the event will receive appropriate disciplinary action.

## LICENSEE EVENT REPORT (LER)

## TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)			
		YEAR	NUMBER	REVISION					
Sequoyah Nuclear Plant Unit 2	050003 28 9 12	--	0 0 2	--	0 0 10	2	CF	0	6

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

## I. PLANT CONDITIONS

Unit 2 was operating in Mode 1 at approximately 70 percent reactor thermal power. Unit 2 was increasing power following a recent reactor trip.

## II. DESCRIPTION OF EVENTS

## A. Event

On February 15, 1992, at 0942 Eastern standard time (EST), Limiting Condition for Operation (LCO) 3.0.3 was entered on Unit 2 as a result of the loss of level indication on the No. 2 cold leg accumulator.

On February 13, 1992, maintenance was being performed to correct a problem with cold leg accumulator No. 2 Level Indicator (LI) 2-LI-63-109 low-level alarm. The maintenance activity involved replacing the alternating current (ac) input card for the level indicator. The work request indicated that card No. 9 associated with Connections 1325 A and B were to be replaced. After verifying that card No. 9 needed replacing, a different card No. 9 was replaced. There are two sets of input cards in the associated panel labeled 1-30. Card No. 9 at Level 8 was replaced and card No. 9 at Level 11 should have been replaced. During the card replacement, the annunciator for 2-LI-63-109 cleared indicating that the problem had been corrected. A postmaintenance test was performed and indicated that there was still a problem with the low-level alarm for the LI.

On February 15, 1992, as a follow-up to the previous maintenance activity, card No. 9 was again to be replaced. Also, card No. 10 was to be replaced. Again, card No. 9 at Level 8 was replaced instead of card No. 9 on Level 11, and card No. 10 on Level 8 was replaced instead of Level 11.

After replacement of the cards, the electrician and the electrical foreman proceeded to test the card to determine if the card worked properly, as requested by the assistant shift operations supervisor. To test the card, the electrician proceeded to short across the input leads to the card. The work instruction contained a caution statement not to short across the bistable inputs. Shorting across the leads caused the feeder breaker that supplies ac power to the instruments associated with the rack to trip. This resulted in the loss of level indication to the No. 2 cold leg accumulator.

## B. Inoperable Structures, Components, or Systems that Contributed to the Event

At the time of the event, one of the two No. 2 cold leg accumulator LIs was inoperable.

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Sequoyah Nuclear Plant Unit 2			SEQUENTIAL	REVISION					
		YEAR	NUMBER	NUMBER					
	050003 28 19 2	--	0 0 2	--	0 0 0 3	OF	0 6		

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

C. Date and Approximate Time of Major Occurrences

1. February 13, 1992 Initial maintenance was performed in an attempt to correct a problem with 2-LI-63-109.
2. February 15, 1992 Subsequent maintenance was performed to correct the problem with 2-LI-63-109.
3. February 15, 1992 at 0942 EST LCO 3.0.3 entered on loss of level indication for the No. 2 cold leg accumulator as a result of the shorting of the bistables causing the feeder breaker to trip.
4. February 15, 1992 at 1010 EST The ac power feeder breaker reset restoring power to the level instrumentation, and LCO 3.0.3 exited.
5. February 16, 1992 The correct card, No. 9 at Level 11, was replaced and the postmaintenance test was successfully performed.
6. February 17, 1992 Card Nos. 9 and 10 on Level 8 were replaced and the configuration was returned to normal.

D. Other Systems or Secondary Functions Affected

Power supply was lost to the following Unit 2 A train instrument loops when the breaker tripped:

1. Reactor Coolant Pump No. 1 Lower Bearing Temperature
2. Reactor Coolant Pump Number 1 No. 1 Sealout Temperature
3. Loop No. 3 Spray Line Temperature
4. Safety Injection Pump Flow
5. Reactor Coolant Pump No. 1 Seal Pressure
6. Cold Leg Accumulator Tank 1 Level Transmitter
7. Cold Leg Accumulator Tank 2 Level Transmitter
8. Cold Leg Accumulator Tank 1 Pressure Transmitter
9. Cold Leg Accumulator Tank 2 Pressure Transmitter

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## TEXT CONTINUATION

DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)			
	SEQUENTIAL		REVISION					
	YEAR	NUMBER	NUMBER					
Sequoyah Nuclear Plant Unit 2	05	00	03	12	18	9	12	-- 0 0 2 -- 0 0 0 4 0 0 6

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

E. Method of Discovery

The event was discovered during routine observations of plant parameters and alarms by the main control room Operations personnel.

F. Operator Actions

Operations quickly evaluated the equipment out of service and entered the appropriate LCOs. Operations then obtained assistance from the system engineer, instrument and electrical maintenance to determine and correct the power supply loss.

G. Safety System Response

Not applicable - no safety system responses were required.

## III. CAUSE OF EVENT

A. Immediate Cause

Shorting the bistable inputs caused the breaker to trip open and the loss of power to the instruments.

B. Root Cause

The root cause of this condition was determined to be the failure to follow procedures. The electrician and the foreman failed to read the work order and caution statement not to short across the bistable inputs. The electrician assumed he knew the correct methodology to test the card.

C. Contributing Factors

The following factors contributed to the event: The foreman performed an inadequate review of the work order, resulting in an inadequate prejob briefing, and failed to ensure that job standards and expectations were met during work performance. Failure to use vendor information led the performer to rely on his knowledge to perform the test. The electrician misread the work package drawing and thought that the input cards were point cards, which are tested by shorting across the inputs.

The following contributed to the incorrect placement of the input cards: There was a lack of familiarity on the part of the foreman and the electrician with the annunciator system. Additionally, the two sets of identically numbered cards created the potential for incorrect replacement from a human factors standpoint.

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		YEAR	NUMBER

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

IV. ANALYSIS OF EVENT

The cold leg accumulator level prior to and subsequent to the loss of level indication was within technical specification limits. The short loss of level indication did not affect accumulator capability to perform its intended function. Therefore, there was no danger to the health and safety of plant personnel or the public.

V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions

The immediate corrective action was to restore the power to the affected instruments and exit the appropriate LCOs.

B. Actions Taken to Prevent Recurrence

The individuals involved with the event will receive appropriate disciplinary action.

Maintenance personnel have been briefed on the requirement and importance of following the work instructions and the importance of prejob briefings. Periodic reinforcing of expectations and standards will continue to be performed. The annunciator system is being replaced in the Unit 2 Cycle 5 refueling outage currently in progress, thereby eliminating the duplicate labeled cards.

A review of training needs will be performed and provided to the Electrical Curriculum Review Committee to ensure that appropriate training is provided on a periodic basis.

VI. ADDITIONAL INFORMATION

A. Failed Components

None.

B. Previous Similar Events

Several previously reported events were identified that contained causes or contributing factors involving the failure to follow procedures, wrong device and/or components, self-verification, lack of rigor and/or discipline, and inadequate oversight. Actions have been and are continuing to be taken to ensure that performance expectations are clearly conveyed and to remove impediments to good personnel performance as possible.



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TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (4)	PAGE (3)
Sequoyah Nuclear Plant Unit 2		SEQUENTIAL	REVISION
		YEAR	NUMBER
	050003 12 18 19 12	002 002	000 006 OF 006

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

VII. COMMITMENTS

- A. A review of training needs will be performed and provided to the Electrical Curriculum Review Committee to ensure that appropriate training is provided on a periodic basis. This action will be completed by April 24, 1992.
- B. The individuals involved with the event will receive appropriate disciplinary action by March 27, 1992.