NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Sequoyah, Unit 1	0 5 0 0 0 3 2 7	1 OF 0 2

TITLE (4)
Inadvertent Feedwater Isolation

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
0 6	1 1	8 5	8 5	0 2 6	0 0	0 7	0 9	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	XX 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 Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		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
Michael E. Frye, Compliance Section Engineer	6 1 5 8 7 0 - 6 7 6 7

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	XX NO				

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

On June 11, 1985, with unit 1 in mode 4 at 270 degrees F and unit 2 operating at 100 percent power a feedwater isolation occurred on unit 1 due to a high-high (hh) steam generator level.

All equipment operated properly, and there was no effect on the public health and safety.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Sequoyah, Unit 1	0 5 0 0 0 3 2 7	8 5	— 0 2 6	— 0 0	0 2 OF 0 2

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

On June 11, 1985, at 0130 CST with unit 1 in mode 4 at 270 degrees F and unit 2 at 100 percent reactor power a main feedwater (MFW) isolation occurred on unit 1. The isolation was initiated from a hh steam generator level in steam generator 1.

The unit was in a cleanup cycle recirculating condensate water through the condensate demineralizer through the MFW regulation valves and back to the condensers. The MFW regulation valves were open to recirculate water during cleanup but the motor driven feedwater isolation valves were closed; therefore, no water was being supplied to the generators from the MFW system. Water for makeup to the generators was being supplied from the auxiliary feedwater (AFW) system. The main steam isolation valve (MSIV) bypass (warming) valves were opened at approximately 270 degrees F generator temperature to heat the steam lines downstream of the MSIVs. The warming was continued until an indicated differential pressure (ΔP) of less than 25 psid across the MSIVs was obtained. When the MSIV for steam generator 1 was opened, the water level indication increased from 35 percent to 100 percent. The feedwater isolation signal is generated by any 2 of the 3 level indications on any one generator being greater than or equal to 75 percent; therefore, when the level in steam generator 1 increased to 75 percent, the feedwater isolation occurred.

The MFW regulation valves were the only equipment in service during the event that are effected by feedwater isolation, and they went to the closed position as required. The steam generator water was being supplied by the AFW system; therefore, the event had no effect on the availability of secondary heat sink.

The cause of the event was determined to be a low operating temperature when the steam generator 1 MSIV was opened. The saturation pressure at 270 degrees F is approximately 26 psig which is very low on the indicated pressure scale of 0-1200 psig, and the 25 psid requirement for opening the valve makes the minimum downstream pressure approximately 1 psig. Under these conditions, it is extremely difficult to determine when the differential pressure is within acceptable limits. The instruction used to open the MSIVs at pressure has been revised to make the temperature for opening the valves between 300 and 350 degrees F. This will ensure that the pressure on both the upstream and downstream sides of the MSIV will be high enough on the indication scale for more accurate ΔP determination before opening the valves. This should prevent a feedwater isolation from occurring due to this cause in the future.

This is the first event of its type and had no effect on the public health and safety.

TENNESSEE VALLEY AUTHORITY
Sequoyah Nuclear Plant
Post Office Box 2000
Soddy Daisy, Tennessee 37379

July 9, 1985

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-327 - FACILITY OPERATING LICENSE DPR-77 - REPORTABLE OCCURRENCE REPORT SQRO-50-327/85026

The enclosed licensee event report provides details concerning a feedwater isolation that occurred on June 11, 1985. This event is reported in accordance with 10 CFR 50.73, paragraph a.2.iv.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

P.R. Wallace

P. R. Wallace
Plant Manager

Enclosure
cc (Enclosure):

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NRC Inspector, NUC PR, Sequoyah

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