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 3

TITLE (4)
Auxiliary Feedwater Starts

EVENT DATE (5) MONTH	DAY	YEAR	LER NUMBER (6) YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	REPORT DATE (7) MONTH	DAY	YEAR	OTHER FACILITIES INVOLVED (8) FACILITY NAMES	DOCKET NUMBER(S)
0 7	2 1	8 5	8 5	0 3 0	0 0	0 8	1 2	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): 1
POWER LEVEL (10): 0 0 3

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

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
Heyward R. Rogers, Compliance Section Engineer	AREA CODE 6 1 5 8 7 0 - 6 1 4 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)

YES (If yes, complete EXPECTED SUBMISSION DATE) XX NO

EXPECTED SUBMISSION DATE (15): MONTH DAY YEAR

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

On July 21, 1985, two events occurred while in mode 2 (startup) which initiated an engineered safety actuation for auxiliary feedwater pump start. The first event occurred due to loss of both main feed pumps which were only on turning gear; however, when they tripped, this actuated start of auxiliary feedwater. The second event was due to a high-high level in steam generator loop 4 caused by a leaking feedwater regulator valve. For both events, the reactor was not affected, the unit remained in mode 2, and the operator action stabilized the secondary side. There was no effect on public health and safety.

8508210033 850812
PDR ADOCK 05000327
S PDR

IE22
1/1

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

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

With the reactor power at 10^{-8} amps (mode 2) on the intermediate range nuclear instrumentation system and with the main feed pumps (MFP) on turning gear, both pumps tripped initiating an engineered safety feature (ESF) for start of the turbine-driven auxiliary feedwater (TDAFW) pump (motor-driven auxiliary feedwater (MDAFW) pumps were already in operation, and feedwater was already isolated). The operator verified that the TDAFW pump was not required and immediately reset the MFPs and stopped the TDAFW pump. This event occurred at 0815 CST on July 21, 1985; however, there was no effect on the reactor, and the unit remained in mode 2.

The cause of the event was due to the condensate dump back valve from the hotwell momentarily failing to the open position (LCV-2-3) resulting in a fluctuation in the condensate system. Since the seal injection water is fed from the condensate system, this caused a momentary drop in seal injection water pressure (set point at 220 psi) and subsequent tripping of the MFPs. All systems actuated as designed, and no anomalies were noted.

A maintenance request (MR) was initiated to investigate the cause of the failure of the dump back valve. Also, an assistant unit operator (AUO) was dispatched to verify hotwell level using locally mounted sight glasses. An assistant shift engineer/senior reactor operator was also dispatched to check the MFPs. No problems were found with the MFPs, and the hotwell level was within allowable limits. The dump back valve controller is considered to be the cause for the valve to have failed open with the controller in automatic. With the controller in manual, the valve performed as expected with no problems. Presently, the unit is at full power and is operating with the valve in manual until the next refueling outage when troubleshooting can be performed on the controller.

On July 21, 1985, a second event occurred, initiating a start of the auxiliary feedwater systems. With the reactor at 3 percent power and steam generator level controlled on the main feedwater bypass valves using 1A MFP, a high-high level occurred in steam generator loop 4 resulting in the ESF actuation. Loop 4 feedwater line had been previously isolated upstream of the regulator valve for maintenance on the regulator valve while the unit was shutdown. When loop 4 was unisolated (1130 CST), loop 4 level sharply increased from 42 percent to 75 percent resulting in a feedwater isolation, loss of MFPs, and start of all auxiliary feedwater pumps. The operator isolated loop 4 feedwater isolation valve in an attempt to prevent a high-high level actuation without success. Immediate action was taken to reset feedwater isolation and MFPs and reopen loops 1, 2, and 3 feedwater isolation valves. Loop 4 isolation valve remained closed until an AUO could manually reisolate loop 4 regulator valve.

Investigation into the event revealed that on July 11, 1985, MR A-533554 had been initiated by Operations to correct a packing leak on 1-FCV-3-103. When unit 1 tripped on July 19, 1985, the MR was worked to adjust the packing on the valve, and this was done on July 19, 1985. Normal practice is to have instrumentation stroke the valve after performance of any maintenance, and this was started on July 20, 1985, with the unit in mode 3. The valve was manually isolated upstream to allow for stroking.

When instrumentation attempted to stroke the valve, according to MR A-533532, it would not stroke. Instrumentation requested assistance from mechanical maintenance when it was noticed that air was flowing out of the bottom of the operator where the operator stem exits the operator and is connected to the valve stem. Upon a review of the

NRC Form 366A (9-83)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

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

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

drawings and manuals, it was suspected that an o-ring had failed on the Fisher Controls Company Model Number 667ENA operator. MR A-532624 was initiated to disassemble the valve and investigate. When the operator was disassembled, the upper bushing was found to be worn, and the hole was elongated. The disassembly also revealed that the spring was slightly cocked and had placed a side load on the operator stem. A new upper bushing was fabricated and new o-rings installed. No other damage was found, and the valve was reassembled.

At that time, the stroke was set by mechanical and instrument maintenance. The instrumentation calibration card called for a two and one-half inch stroke, and this stroke setting was completed on July 21, 1985. The valve was then unisolated about 1130 CST on July 21, 1985, when shortly thereafter, the ESF actuation occurred due to high-high level in the number 4 steam generator. Instrument and mechanical maintenance personnel were dispatched to the valve, and it was found that the valve was approximately one-half inch off the seat. Upon investigation, it was found that the valve had bottomed out in the operator and not on the seat. After reisolation, the valve stroke was again reset taking care to ensure the valve was seated, and subsequent testing was performed to ensure that stroke times were met. The loop 4 feedwater line was unisolated, and no leaks were noted through the regulator valve. It has been determined that the root cause for the valve not being on the seat was due to lack of clarity in the vendor procedure used to seat the valve prior to stroking. To prevent recurrence, a maintenance instruction will be written to clarify the method for ensuring the valve is properly seated prior to stroking. This action will be completed by September 27, 1985.

There has been no previous occurrences, and the event posed no threat to the health and safety of the public.

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

August 15, 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-50-327/85030

The enclosed licensee event report provides details concerning two engineered safety feature actuations occurring on July 21, 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):

J. Nelson Grace, Regional Administrator
U.S. Nuclear Regulatory Commission
Suite 2900
101 Marietta Street, NW
Atlanta, Georgia 30323

Records Center
Institute of Nuclear Power Operations
Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339

NRC Inspector, NUC PR, Sequoyah

IE22
1/1