TENNESSEE VALLEY AUTHORITY
6N 38A Lookout Place
Chattanooga, TN 37402-2801

JUL 1 3 1989

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

Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-327 - FACILITY OPERATING LICENSE DPR-77 - LICENSEE EVENT REPORT (LER) 50-327/89017

The enclosed LER provides details concerning failure to properly calibrate the auxiliary control room pressurizer level control transmitters. This resulted in operation prohibited by technical specification requirements. This event is reported in accordance with 10 CFR 50.73, paragraph a.2.i.B.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. R. Bynum, Vice President
Nuclear Power Production

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

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

NRC Resident Inspector
Sequoyah Nuclear Plant
2600 Igou Ferry Road
Soddy Daisy, Tennessee 37379

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

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

TITLE (4)
Failure to properly calibrate the Pressurizer level control transmitters resulted in an operation prohibited by Technical Specification.

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 3	8 9	8 9	0 1 7	0 0	0 7	1 3	8 9	Sequoyah unit 2	0 5 0 0 0 3 2 8
										0 5 0 0 0

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) 1 0 0	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 Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	X 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
J. W. Proffitt, Jr., Compliance Licensing Engineer	AREA CODE 6 1 5 — 8 4 3 - 7 4 6 1

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
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		0 9	2 9	8 9

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

On June 13, 1989, at 1055 EDT with Units 1 and 2 in mode 1 (100 percent power, 578 degrees F, and 2,235 psig), the assistant shift operations supervisor (ASOS) observed that the auxiliary control room (ACR) pressurizer level indicators were indicating high as compared to the main control room (MCR) pressurizer level indicators. Operations personnel declared both channels of the ACR pressurizer level indicators inoperable and entered technical specification limiting condition for operation (LCO) 3.3.3.5. This event was caused from failure to properly calibrate the pressurizer level transmitters during the last calibration check; an adequate soak time was not provided prior to calibration. The level transmitters were recalibrated, and LCO 3.3.3.5 was exited at 0015 EDT on June 15, 1989. Another contributing factor was the performance of an inadequate channel check in that ACR instruments were not required to be compared to the MCR instruments. A comparison between the other ACR and MCR instruments identified no other cases of inadequate channel checks. Additional corrective actions will include revising SI-88, to require a soak time when calibrating the pressurizer level transmitters. SI-3 will be revised to ensure proper monthly channel checks by requiring a comparison between the remote shutdown instrumentation to equivalent instrumentation in the MCR. Additionally, an investigation is being performed to determine if other procedures adequately address soak time considerations. Upon completion of the investigation, the appropriate corrective actions will be determined and results provided to NRC by September 29, 1989.

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

Description

On June 13, 1989, at 1055 Eastern daylight time (EDT), with Unit 1 in mode 1 (100 percent reactor power, 578 degrees Fahrenheit, and 2,235 pounds per square inch gauge), the assistant shift operations supervisor (ASOS) observed that the auxiliary control room (ACR) pressurizer level indicators (1-LI-68-325C and -326C) were high (72 percent) as compared to the main control room (MCR) indicators (60 percent) when reviewing Surveillance Instruction (SI) 3, "Daily, Weekly, and Monthly Logs." Based on operating parameters (i.e., reactor power at 100 percent), the expected pressurizer level is 60 percent. Operations personnel declared the ACR pressurizer level instrumentation (EIIS code AB) inoperable and entered technical specification limiting condition for operation (LCO) 3.3.3.5. LCO 3.3.3.5 requires one channel of the remote shutdown instrumentation for pressurizer level to be operable; with less than the one channel operable, either restore the inoperable channel to operable status within seven days or be in hot shutdown within the next 12 hours.

While Unit 1 was in mode 4, the ACR pressurizer level transmitters (1-LT-68-325C and -326C), Foxboro model E13DH, were calibrated on September 29, 1988, and October 5, 1988, respectively, in accordance with SI-88, "Remote Shutdown Monitoring Instrumentation - Pressurizer Level Channel Calibration (Refueling Outage)." The "as-found" readings appeared to average approximately 12 percent low. Both loops were recalibrated to what appeared to be the correct setting. The calibration of the transmitters occurred while the reactor coolant system (RCS) was drained to mid-loop. The low RCS level could cause saturation of the transmitters. Calibration is achieved by applying a pressure source to the sense line. The pressure is varied while monitoring the output sense current providing the data to determine if the instrument is within calibration. If the transmitter is overranged (i.e., in saturation) prior to calibrating, a pressure source within the normal operating range of the transmitter must be applied for a sufficient amount of time (soak time) to allow the transmitter to come out of saturation. If the transmitter is not given an adequate soak time, a zero shift will show up over the transmitter span. SI-88 did not require a soak time. The measuring and test equipment used was in calibration for the range for which the pressurizer level transmitters were calibrated; therefore, was not a contributing factor.

SI-3 requires that a channel check be performed; this channel check consists of comparing one channel of the remote instrumentation pressurizer level to the other channel. These channels must agree within 3.5 percent according to the SI. Comparison of readings to the expected values was not required by the SI. SI-3 does not require the ACR pressurizer level indicators to be compared to the MCR pressurizer level indicator; accordingly, the ACR indicators appeared to meet the acceptance criteria. A review of previous SI-3s showed that the indicators had been reading high since restart. Previous reviews of SI performance packages had failed to identify the anomalous data. On June 15, 1989, at 0014, LCO 3.3.3.5 was exited after recalibration of both ACR pressurizer level transmitters.

Cause

This event has two contributing causes, which are (1) failure to properly calibrate the pressurizer level transmitters because of an inadequate procedure during the last calibration check; and (2) failure of SI-3 to require the ACR pressurizer level indicators to be compared to the MCR pressurizer level indicators. Additionally, inadequate reviews of the previous SI performance data packages had resulted in acceptance of anomalous data.

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

Analysis of Event

Because SI-88 was performed without properly calibrating both channels of the remote shutdown instrumentation, the technical specification surveillance requirements were not met. This occurrence is an operation prohibited by technical specifications and is therefore being reported in accordance with 10 CFR 50.73.a.2.i.B. This condition has existed since October 5, 1988, after calibration of the instruments. Because both channels of the pressurizer level remote shutdown instrumentation were inoperable, pressurizer level instrumentation in the ACR would have been indicating high in the event of a control room evacuation. Actual level control is not affected by these instruments. This condition would not have resulted in adverse action being initiated by Operations personnel and would not have affected ability to shut down the plant. Accordingly, this condition would not adversely affect the health and safety of the public.

Corrective Actions

Immediate corrective actions include initiating work requests (WRs) to investigate and correct the problem associated with the pressurizer level indicators in the ACR. The ACR pressurizer level indicators were found to be approximately 11 percent high and were recalibrated to the proper setting on June 15, 1989. Operations personnel initiated a potential reportable occurrence on June 14, 1989, to determine the root cause of the event. Condition adverse to quality report SQP890348 was initiated to determine why SI-3 did not require a cross-check between the ACR and MCR indicators. Operations personnel made a comparison between the MCR instruments and the ACR instruments; no other cases of inadequate channel checks were identified.

The actions taken to prevent recurrence include revising SI-3 to require the remote shutdown instrumentation identified in technical specifications be compared to equivalent instrumentation in the MCR and revising SI- 88 to require a soak time when performing a channel calibration of the pressurizer level transmitters. Plant management also issued a memorandum to licensed personnel emphasizing the importance and significance of their role in reviewing SIs and identifying potential problems. Additionally, an investigation is being performed to determine if other procedures adequately address soak time considerations. Upon completion of the investigation, the appropriate corrective actions will be determined and results provided to NRC by September 29, 1989.

Commitments

1. TVA will revise SI-88 to require a soak time when calibrating the ACR pressurizer level transmitters by September 1, 1989.

2. TVA will revise SI-3 to compare the remote shutdown instrumentation to equivalent instrumentation in the MCR by September 1, 1989.

3. An investigation is being performed to determine if other procedures adequately address soak time considerations. Upon completion of the investigation, corrective actions will be determined and results provided to NRC by September 29, 1989.

There have been no previous occurrences of this type.