

TENNESSEE VALLEY AUTHORITY

6N 38A Lookout Place
February 7, 1990

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

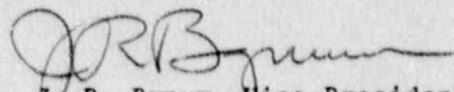
Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO.
50-327 - FACILITY OPERATING LICENSE DPR-77 - LICENSEE EVENT REPORT (LER)
50-327/90001

The enclosed LER provides details of an event wherein several essential raw cooling water valves servicing safety-related equipment were not verified to be in the correct position at the required frequency. This event is being reported in accordance with 10 CFR 50.73, paragraph a.2.i.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



J. R. Bynum, Vice President
Nuclear Power Production

Enclosure

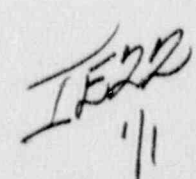
cc (Enclosure):

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
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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Sequoyah Nuclear Plant, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 3 2 7 1										PAGE (3) OF 0 4																													
TITLE (4) Essential raw cooling water valves servicing safety-related equipment not verified to be in the correct position at the required frequency because of personnel error.																																																	
EVENT DATE (5) MONTH DAY YEAR 0 1 0 8 9 0 9 0									LER NUMBER (6) YEAR SEQUENTIAL NUMBER REVISION NUMBER 0 0 1 0 0 0 2 0 7 9 0									REPORT DATE (7) MONTH DAY YEAR 0 1 0 8 9 0 9 0									OTHER FACILITIES INVOLVED (8) FACILITY NAMES DOCKET NUMBER(S) Sequoyah, Unit 2 0 5 0 0 0 3 2 8																						
OPERATING MODE (9) 1										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																																							
POWER LEVEL (10) 1, 0, 0										20.402(b)										20.405(e)										60.73(a)(2)(iv)										73.71(b)									
										20.405(a)(1)(i)										60.36(a)(1)										60.73(a)(2)(v)										73.71(c)									
										20.405(a)(1)(ii)										60.36(a)(2)										60.73(a)(2)(vi)										OTHER (Specify in Abstract below and in Text, NRC Form 366A)									
										20.405(a)(1)(iii)										X 60.73(a)(2)(i)										60.73(a)(2)(viii)(A)																			
										20.405(a)(1)(iv)										60.73(a)(2)(ii)										60.73(a)(2)(viii)(B)																			
										20.405(a)(1)(v)										60.73(a)(2)(iii)										60.73(a)(2)(ix)																			
LICENSEE CONTACT FOR THIS LER (12)																																																	
NAME Geof Hipp, Compliance Licensing Engineer																				TELEPHONE NUMBER AREA CODE 6 1 5 8 4 3 - 7 7 6 6																													
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)

At approximately 1700 Eastern standard time (EST) on January 8, 1990, with both Units 1 and 2 in Mode 1 at 100 percent power, it was discovered by the Unit 1 unit operator that the positions of several essential raw cooling water (ERCW) valves in the flowpath supplying the reactor containment building lower compartment vent coolers on both units were not being periodically verified to be correct as required by technical specifications. The correct position of the valves was verified and documented on January 10, 1990. The applicable surveillance instruction (SI-33.1) was placed on administrative hold that same day until revision could be completed and approved. On January 12, 1990, during a review of the in-progress Revision 18 of SI-33.1, four additional valves that should have been on the SI-33.1 checklists were identified. The correct position of these additional valves was verified and documented on January 12, 1990. These valves were included in the SI-33.1 valve checklist in Revision 18 along with the valves previously identified. The SI-33.1 revision was completed and approved on January 12, 1990. The root cause of this event has been attributed to personnel error during procedure revisions and during the review of workplans (WPs). As corrective action to prevent recurrence, an information notice has been issued to WP reviewers summarizing this event and reminding them of their responsibility for identifying procedure interfaces.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Sequoyah Nuclear Plant, Unit 1	DOCKET NUMBER (2) 0500032790-001-00002 OF 04	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

Description of Event

At approximately 1700 Eastern standard time (EST) on January 8, 1990, with both Units 1 and 2 in Mode 1 at 100 percent power, 2,235 pounds per square inch gauge, 578 degrees Fahrenheit, it was discovered by the Unit 1 unit operator that the positions of several essential raw cooling water (ERCW) (EIIS Code BI) valves in the flowpath supplying the reactor containment building lower compartment vent coolers (EIIS Code BK) on both units were not being periodically verified to be correct as required by technical specifications (TSs). Surveillance Requirement (SR) 4.7.4.a requires that the position of ERCW valves, which service safety-related equipment, be verified to be correct every 31 days for all manual, power-operated, or automatic valves not locked, sealed, or otherwise secured in position. This SR is typically satisfied by performance of Surveillance Instruction (SI) 33.1, "ERCW Valves Servicing Safety Related Equipment (Unit)." The valves initially discovered as not having their positions verified were 1-FCV-67-95 (servicing the Unit 1 lower compartment cooler group C) and 2-FCV-67-89, 90, 105, and 107 (servicing Unit 2 lower compartment cooler groups). Although the adequacy of the SI was in question, the physical flowpath was not. Flowpath continuity was confirmed on January 8, 1990, by the presence of normal temperatures on components in containment carrying heat loads. After confirming that the subject valves were not included in any other SI, the correct position of the valves was verified and documented on January 10, 1990. SI-33.1 was placed on administrative hold that same day until revision could be completed and approved. On January 12, 1990, during a review of the in-progress Revision 18 of SI-33.1, four additional valves were identified that should also have been on the SI-33.1 checklists. These valves were 1-FCV-67-523B, 577B, 2-FCV-67-523B, and 577B, which supply the B train lower compartment vent cooler groups on both units. The correct position of these additional valves was verified and documented on January 12, 1990. These valves were included in the SI-33.1 valves checklist in Revision 18 along with the valves previously identified. The SI-33.1 revision was completed and approved on January 12, 1990.

Cause of Event

The root cause of this event has been attributed to personnel error during procedure revisions and during the review of workplans (WPs). A personnel error in the preparation of the procedure revision package for Revision 14 of SI-33.1 resulted in the failure to verify the position of Valve 1-FCV-67-95. This revision, in August 1988, followed the replacement of check valves in the ERCW supply lines to the lower compartment vent coolers on Unit 1 with motor-operated valves (MOVs). The revision erroneously identified FCV-67-95 as a Unit 2 only valve, thus omitting 1-FCV-67-95 from the SI-33.1 checklist. This error was not identified by the independent qualified reviewer (IQR) or by the cross-disciplinary reviewer (CDR) during processing of the revision package.

A personnel error during the review of the WP that replaced the lower compartment vent cooler ERCW supply check valves with MOVs on Unit 2 resulted in the failure to revise SI-33.1 to include Valves 2-FCV-67-89, 90, 105, and 107, and, consequently, the failure to verify the position of these valves at the required frequency following installation. Review and approval of WPs is administered under Administrative Instruction (AI) 19, Part IV, "Plant Modifications: After Licensing," and AI-19,

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1) Sequoyah Nuclear Plant, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 2 7 9 0 — 0 0 1 — 0 0 0 3 OF 0 4	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

TEXT (If more space is required, use additional NRC Form 386A's) (17)

Cause of Event (Continued)

Part VI, "Modifications: Permanent Design Change Control Program." The review process relies upon the experience of the reviewer and is dependent upon personnel recognizing the impact of the modification on plant instructions. Review of a WP for instruction revisions can occur at two stages. Any instructions requiring revision because of a modification are supposed to be identified during the first review by the respective section reviewers. If the reviewer does not identify any instruction changes related to the modification, the section will not have any additional opportunity to revise their instructions. During the procedure revision process, a section has the opportunity to complete an in-depth review of the modification's impact on its instructions. This second review results in development of the instruction revision package during which additional instructions may be identified as being affected by the modification. If additional instructions are identified, revision packages are developed for them at that time. In the case of the ERCW valve modification on Unit 2, neither review identified SI-33.1 as an instruction requiring revision.

Analysis of Event

This event is being reported in accordance with 10 CFR 50.73, paragraph a.2.i, as an operation prohibited by technical specifications because the requirements of SR 4.7.4.a were not met.

The ERCW system is described in Section 9.2.2 of the SQN Updated Final Safety Analysis Report (UFSAR). The lower compartment air cooling system is described in Section 9.4.8 of the UFSAR. The lower compartment vent coolers are one of three coolers in each of the four lower compartment cooler groups. Each lower compartment cooler group is comprised of one reactor coolant pump motor cooler, one control rod drive motor cooler, and one lower compartment vent cooler. These coolers are required to be in operation in various combinations during plant operations to maintain component temperatures within limits. The lower containment vent coolers are required to be operable by TS Limiting Condition for Operation 3.6.2.2. These coolers are required to ensure that adequate heat removal capacity is available to provide long-term cooling following a non-LOCA (loss of coolant accident) event. Postaccident use of these coolers ensures containment temperatures remain within environmental qualification limits for safety-related equipment.

All of the ERCW valves that were discovered in this event to have not been periodically verified to be in the correct position were, in fact, found to be in the correct position when checked on January 10, 1990, and January 12, 1990. These valves had been performing their normal operational functions and were capable of performing their postaccident functions as well. Therefore, there was no adverse effect on the health and safety of the public or plant personnel.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
Sequoyah Nuclear Plant, Unit 1	0500032790-001-0004 OF 04	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

Corrective Action

The immediate action taken on January 10, 1990, and on January 12, 1990, was to verify the affected valves were in the correct position and document that verification. SI-33.1 was placed on administrative hold on January 10, 1990, until revision could be completed and approved on January 12, 1990.

As corrective action to prevent recurrence, an information notice has been issued to WP reviewers summarizing this event and reminding them of their responsibility for identifying procedure interfaces.

Additional Information

There have been two previous reported occurrences of a failure of SIs to completely fulfill SRs as a result of personnel error during the procedure revision process (LERs 50-327/84040 and 50-328/86006) and two previously reported occurrences of a failure of SIs to completely fulfill SRs as a result of personnel error while processing WPs (LERs 50-327/87008 and 50-328/88002). These occurrences are believed to have been isolated occurrences without any connection to this event.

Commitments

None.

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