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R.J. Adney
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Sequoyah Nuclear Plant

March 15, 1996

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2 - DOCKET NO. 50-327 AND 50-328 - FACILITY OPERATING LICENSES DPR-77 AND DPR-79 - LICENSEE EVENT REPORT (LER) 50-327/96002

The enclosed report provides details concerning the identification that surveillance requirements associated with the fire hose stations inside the reactor buildings were not being performed as required by technical specifications (TSs). The procedure implementing the required surveillance was incorrect in that it did not ensure that new replacement hoses were hydrostatically tested within the required timeframe. This condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as an operation prohibited by the plant's TSs. This report also satisfies the reporting requirement for TS Limiting Condition for Operation 3.7.11.4 Action (a).

Sincerely,

R. J. Adney

Enclosure
cc: See page 2

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Enclosure
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NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Sequoyah Nuclear Plant (SQN), Unit 1	05000327	1 of 8

TITLE (4) Surveillance Requirements Associated with Fire Protection Hose Stations were not Performed as Required by Technical Specifications

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 NAME	DOCKET NUMBER
2	15	96	96	002	00	03	15	96	SQN UNIT 2	05000328
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	100	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)	X OTHER
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A	(Specify in Abstract below and in Text, NRC Form 366A)
		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 (Include Area Code)
J. W. Proffitt, Compliance Licensing Engineer	(423)843-6651

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).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On February 15, 1996, with Units 1 and 2 at 100 percent power, it was discovered that surveillance requirements (SRs) associated with the hydrostatic testing of fire hose stations inside the reactor buildings were not being performed as required by technical specifications (TSs). TSs require that a hydrostatic test be performed every three years. The procedure implementing the SR was incorrect in that it did not ensure that the new replacement hoses were hydrostatically tested within the required frequency. The cause of this condition was determined to be an inadequate procedure revision and an inadequate review by the involved personnel. The procedure has been revised to ensure that replacement hoses are tested within the required frequency. This report also satisfies the reporting requirement for TS Limiting Condition for Operation 3.7.11.4 Action(a).

I. PLANT CONDITIONS

Units 1 and 2 were in power operation, Mode 1, at approximately 100 percent power.

II. DESCRIPTION OF EVENT

A. Event

On February 15, 1996, it was discovered that surveillance requirements (SRs) associated with the hydrostatic testing of fire hose stations (EIIS Code KF) inside the reactor buildings were not being performed as required by technical specifications (TSs). TSs require that a hydrostatic test be performed every three years. The procedure implementing the SR was incorrect in that it allowed hoses inside the reactor buildings to be replaced with new hoses, but did not ensure that the new replacement hose hydrostatic test requirement would meet the required frequency.

A review of the hoses inside the Units 1 and 2 reactor buildings concluded that the hoses had been replaced within the past three years. It was subsequently determined that 9 of the 24 fire hose stations inside the Unit 1 annulus were out of the TS required frequency and that an operation prohibited by TSs existed. This report also satisfies the reporting requirement for TS Limiting Condition for Operation (LCO) 3.7.11.4 Action(a).

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

None.

C. **Dates and Approximate Times of Major Occurrences**

November 10, 1990 — The surveillance instruction for hydrostatically testing fire hoses was revised, removing the requirement to ensure that the new hoses met the requirements of the surveillance and were in frequency.

May 6-7, 1993 — The hoses for the Unit 1 annulus hose stations were replaced with new hoses. The new hoses had been hydrostatically tested by the manufacturer between July 1991 and February 1993. (It was subsequently determined that only 9 of the 24 fire hose stations inside the Unit 1 annulus were out of the TS required frequency.)

May 13, 1993 — The hoses for the Unit 2 annulus hose stations were replaced with new hoses. The new hoses in the Unit 2 annulus were hydrostatically tested by the manufacturer in January and February 1993.

July 12, 1994 — The Unit 2 lower containment hose stations hoses were replaced with new hoses. The new hoses had been hydrostatically tested by the manufacturer, but the test date was not documented.

September 21, 1995 — The hoses for the Unit 1 lower containment hose stations were replaced with new hoses. The new hoses had been hydrostatically tested by the manufacturer in January 1995.

February 15, 1996	It was discovered that the procedure implementing the TS fire hose hydrostatic testing SR was incorrect in that it allowed hoses inside the reactor building to be replaced with new hoses, but did not ensure that the new replacement hoses were hydrostatically tested within the required TS frequency.
February 15, 1996 at 1445 Eastern standard time(EST)	The action for LCO 3.7.11.4 was entered on both units as a result of the hose stations in the reactor buildings possibly being inoperable.
February 29, 1996	The hoses in the Unit 1 annulus were replaced with hoses that had been hydrostatically tested within the required frequency.
March 5, 1996 at 1415 EST	The hoses in Unit 1 lower containment were determined to be within the required test frequency. LCO 3.7.11.4 was exited on Unit 1. Unit 2 will remain in the LCO action until the hoses in Unit 2 lower containment can be verified to be within frequency during the next outage.

D. Other Systems or Secondary Functions Affected

None.

E. Method of Discovery

During a review of the surveillance instruction for hydrostatic testing of fire hose by the fire protection engineer, it was discovered that the procedure contained a provision to install new hoses in the reactor building rather than perform the

hydrostatic test. It was determined that the procedure did not require the hydrostatic test date for the new hose to be verified or performance of the test before installation.

F. Operator Actions

After the control room operators were notified of the condition, the action for LCO 3.7.11.4 was entered.

G. Safety System Responses

None required.

III. CAUSE OF EVENT

A. Immediate Cause

The immediate cause of this condition was the failure to properly implement the TS SR.

B. Root Cause

The root cause of this condition was an improper procedure revision and inadequate procedure reviews during the performance of the revision. Specifically, when the surveillance instruction was revised in November 1990, the revision deleted a requirement to ensure that the new or replacement hose was within frequency for TS requirements. For ALARA reasons, the procedure was revised to allow replacement of the existing hose with a new hose. The revised procedure did not require verification or documentation of the purchase date or hydrostatic test date of the hose. The procedure allowed a three-year replacement of the hose based on the installation date.

The procedure revision was based on National Fire Protection Association (NFPA) Code 1962, 1988 edition, which was in effect at the time of the procedure revision. This NFPA code did not require new fire hoses to be tested before being placed in service and

allowed five years before the next hydrostatic test was required to be performed. The NFPA code based subsequent testing of new hoses on the purchase date of the new hose. Therefore, the involved personnel revised the subject procedure based on code requirements without ensuring that TS requirements were met.

IV. ANALYSIS OF EVENT

TS SR 4.7.11.4.c.2 requires the hydrostatic testing of fire hoses every three years.

It has been determined that 9 of the 24 hose stations inside the Unit 1 annulus were outside the required frequency. All of the hoses were removed from the Unit 1 annulus and were tested and were determined to meet the hydrostatic pressure acceptance criteria. The hoses in Unit 1 lower containment were determined to be within the required test frequency. Therefore, the hoses in the Unit 1 annulus and lower containment would have been able to perform their intended function.

The hoses in the Unit 2 annulus were determined to be within the required test frequency based on the manufacturer test date. TVA believes that based on the information available, the hoses in Unit 2 lower containment are within the required frequency. The replacement hoses were new hoses and had been hydrostatically tested by the manufacturer. Based on these facts and considerations, the condition would not adversely affect the health and safety of plant personnel or the general public.

V. CORRECTIVE ACTIONS

A. Immediate Corrective Action

The immediate action was to enter the action of the LCO and establish compensatory measures on both units. It was determined that 9 of the 24 fire hose stations in the Unit 1 annulus were not within the required

frequency. The hoses inside the Unit 1 annulus were replaced with new hoses, and their test dates were documented. The fire hose stations in Unit 1 lower containment were determined to be within the TS required frequency. The hose stations inside the Unit 2 annulus were determined to be in frequency. Unit 2 will remain in the LCO action until the hoses in Unit 2 lower containment can be verified during the next outage currently scheduled for April 19, 1996.

B. Corrective Action to Prevent Recurrence

The appropriate procedure has been revised to require verification and documentation of the hydrostatic test before the replacement hose can be installed.

The appropriate personnel will be trained on this event and their responsibilities with regard to procedure revisions.

VI. ADDITIONAL INFORMATION

A. Failed Components

None.

B. Previous Similar Events

A review of previous reportable events identified several previous reports associated with missed surveillances. Three LERs (50-327/94003, 50-327/94012, and 50-327/94013) were the result of an inadequate procedure revision and review during a procedure enhancement project. In these LERs, when the procedures were revised, a TS SR was dropped or TS applicability was not properly evaluated.

As a result of the corrective action from the previous events, it was determined that the problems were associated with only Operations procedures. The Fire Operations section is a part of the Operations group. A 100 percent review (104 procedures) of Operations'

surveillance instructions was conducted, as well as a sample of the Fire Operations surveillance instructions (11 procedures). This review did not identify any additional procedures that did not correctly implement TSs. The previous corrective actions and the condition described in this LER indicate that the remaining Fire Operations procedures need to be evaluated.

There is no indication that the current procedure change and review processes are not effective. The missed surveillances that have been identified, including the condition described in this LER, resulted during the procedure enhancement project. Independent qualified reviewer training, implemented after the enhancement, was provided to strengthen the knowledge of the reviewers on what their responsibilities include. Therefore, no additional corrective actions are needed in this area.

VII. COMMITMENTS

1. The appropriate personnel will be trained on this event and their responsibilities with regard to procedure revisions. This action will be completed by April 12, 1996.

2. A 100 percent review of the Fire Operations surveillance instructions will be performed to ensure that the fire protection surveillance requirements are correctly implemented. This action will be completed by May 31, 1996.