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)

Security Computer Malfunction Causes Missed Fire Watch

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 5	2 5	8 6	8 6	— 0 2 4 —	0 0	0 6	2 0	8 6	Sequoyah, Unit 2	0 5 0 0 0 3 2 8
										0 5 0 0 0

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

OPERATING MODE (9)	5									
POWER LEVEL (10)	0 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)	XX	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
E	1 A	C P U	R 4 2 3						

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 May 25, 1986, the hourly fire watch required by Technical Specification (TS) Limiting Condition for Operation (L.C.O.) 3.7.12 was not fully completed between the hours of 1300 CDT and 1400 CDT. At the time of the event, both units were in mode 5 at less than 200 degrees F.

A power transient on the plant security micro access computer (MAC-540) caused a loss of access memory thereby locking all access doors. Because of this, plant fire watches could not open every door required during the 1300 CDT to 1400 CDT round. The shift engineer (SE) instructed them to physically feel each door that could not be opened.

The root cause of the event has been determined to be a lack of a preventative maintenance (PM) program on the backup battery for the MAC-540 memory. Additionally, there were delays in reestablishing memory into the computer because the computer disk drive would not accept information from the backup disk. A PM program is being written for both the battery and the disk drive to ensure their future operation. Additionally, the type of disk used for backup is being changed from a hard sector to soft sector disk. All items will be complete by August 1, 1986.

The fire watch was completed in all accessible spaces, and plant fire detection and suppression systems were operable. Therefore, this event is not considered to have affected the public health and safety.

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

DESCRIPTION OF EVENT

On May 25, 1986, at 1226 CDT, the plant security micro access computer (MAC-540) (E-1A-CPU-R423) malfunctioned locking all security access doors. Because of this, some of the fire doors on the hourly fire watch scheduled between 1300 CDT and 1400 CDT were not properly verified. At the time of the event, both units 1 and 2 were in mode 5 at less than 200 degrees F.

At 1226 CDT, a malfunction occurred on the MAC-540 which resulted in all the security access doors being locked; therefore, there was not a breach of security associated with the event. However, because the doors were locked, the fire watch was not able to gain access to all required areas. This prevented the complete execution of fire watch rounds required between 1300 CDT and 1400 CDT. The shift engineer (SE) was cognizant of the condition and instructed the fire watches to access all areas possible and to physically feel the doors associated with all locked rooms. This provided as high a level of confidence as possible during the timeframe covered. By 1430 CDT, security personnel were able to gain access for the fire watches to perform their rounds, and they were completed by 1515 CDT. All rounds after that time were completed within the 1.0 hour time requirement.

Instrument mechanic personnel were delayed in access to the MAC-540 due to locked doors; therefore, work did not start until between 1300 CDT and 1330 CDT. The computer was returned to full operability by 1848 CDT.

CAUSE OF THE EVENT

The MAC-540 malfunction caused all security access doors to be locked. This was the result of a complete loss of access memory. This loss has been attributed to a momentary disturbance of power to the system. The loss of memory is normally protected against by a backup battery which will retain the memory in the event of a power transient. During the maintenance effort, it was determined that the backup battery did not have sufficient capacity to hold the memory.

There were additional problems that inhibited the maintenance effort. First of all, security personnel maintain backup disks to reload the memory bank in case of a loss. This effort would normally take three to five minutes to perform; however, the backup disk would not load into the computer. This caused a significant amount of time to be expended trying to determine if any computer hardware problems existed. It was finally concluded that the computer was operating properly, and a spare disk of a different type was used to reload the memory.

The root cause of this event has been determined to be a failed backup battery to the computer memory which was the result of a lack of a preventative maintenance (PM) program. Additionally, the delay in bringing the system back into service has been attributed to the use of an inappropriate backup disk and no program to perform PM on the computer disk drive unit.

ANALYSIS OF THE EVENT

During this event, fire watch personnel performed their rounds by either accessing rooms where possible or feeling of doors where no access was available. This gave a high confidence in that it effectively restricted any possible problem areas. Also, the small amount of time that lapsed during this event limited the probability that a fire would occur. Additionally, during the timeframe referenced, the plant fire detection and suppression system were operable. Because of this, the event is not considered to have caused any danger to the public health and safety.

CORRECTIVE ACTIONS

The backup battery was replaced, and the disk drive unit cleaned. The door access memory was then reloaded, and normal door access was regained.

The failure of the memory in the MAC-540 computer could have been prevented if the battery had been in proper service; therefore, a PM procedure will be written to maintain the battery. Additionally, there will be a PM procedure written on the MAC-540 disk drive unit to ensure it is functional, and the type of disks used (hard sector disk) for backup will be replaced with the appropriate disk (soft sector disk) for the drive used. All corrective actions will be complete by August 1, 1986.

ADDITIONAL INFORMATION

Because this event prevented the total completion of the fire watch rounds as required in accordance with LCO 3.7.12, it is reportable under 10 CFR 50.73, paragraph a.2.i.B.

There was one previous occurrence of failure to complete a fire watch due to a loss of power on the MAC-540. That event only affected one door and was reported under LER 1-85011.

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

June 20, 1986

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-50-327/86024

The enclosed licensee event report provides details concerning a malfunction on the plant security access computer which caused a required hourly fire watch to be missed. This event is reported in accordance with 10 CFR 50.73, paragraph a.2.i.B.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. M. Nobles
for P. R. Wallace
Plant Manager

Enclosure
cc (Enclosure):

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