



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379-2000

Ken Powers  
Vice President, Sequoyah Nuclear Plant

May 10, 1994

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

Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2 - DOCKET  
NOS. 50-327 AND 50-328 - FACILITY OPERATING LICENSES DPR-77 AND DPR-79 -  
LICENSEE EVENT REPORT (LER) 50-327/94006

The enclosed LER provides details involving two events concerning the inoperability of both trains of the control room emergency ventilation system (CREVS). Tornado warnings and sightings of tornados on two separate occasions resulted in the closure of the tornado dampers, causing the inoperability of the CREVS. These events are being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as operations prohibited by technical specifications and 10 CFR 50.73(a)(2)(iii) as a natural phenomenon that posed an actual threat to the safety of the nuclear power plant.

Sincerely,

Ken Powers

Enclosure  
cc: See page 2

100073

9405180165 940510  
PDR ADDCK 05000327  
S PDR

U.S. Nuclear Regulatory Commission

Page 2

May 10, 1994

cc (Enclosure):

INPO Records Center  
Institute of Nuclear Power Operations  
700 Galleria Parkway  
Atlanta, Georgia 30339-5957

Mr. D. E. LaBarge, Project Manager  
U.S. Nuclear Regulatory Commission  
One White Flint, North  
11555 Rockville Pike  
Rockville, Maryland 20852-2739

NRC Resident Inspector  
Sequoyah Nuclear Plant  
2600 Igou Ferry Road  
Soddy-Daisy, Tennessee 37379-3624

Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323-2711

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Sequoyah Nuclear Plant (SQN), Unit 1										DOCKET NUMBER (2) 050003		PAGE (3) 27 OF 04	
TITLE (4) Control Room Emergency Ventilation System Inoperable Because of Closure of Tornado Dampers													
EVENT DAY (5) 04/15/94				LER NUMBER (6) 006				REPORT DATE (7) 05/10/94				OTHER FACILITIES INVOLVED (8) Sequoyah, Unit 2	
MONTH DAY YEAR				SEQUENTIAL NUMBER				REVISION NUMBER				DOCKET NUMBER(S) 05000328	
OPERATING MODE (9) 2				THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following)(11) 20.402(b) 20.405(c) 50.73(a)(2)(iv) 73.71(b)				50.73(a)(2)(v) 73.71(c)				50.73(a)(2)(vii) OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
POWER LEVEL (10) 001				20.405(a)(1)(i) 50.73(a)(2)(i) 50.73(a)(2)(viii)(A)				20.405(a)(1)(ii) 50.73(a)(2)(ii) 50.73(a)(2)(viii)(B)				20.405(a)(1)(iii) XX 50.73(a)(2)(iii) 50.73(a)(2)(x)	
LICENSEE CONTACT FOR THIS LER (12) J. W. Proffitt, Compliance Licensing													
NAME										TELEPHONE NUMBER 615 843-6651			
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) YES (If yes, complete EXPECTED SUBMISSION DATE) X NO										EXPECTED SUBMISSION DATE (15) 05/10/94			

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

On April 15, 1994, at 1240 Eastern daylight time (EDT), with Unit 1 in Mode 2 and Unit 2 at 100 percent power, and on April 27, 1994, at 1500 EDT, with Unit 1 at 48 percent power and Unit 2 at 100 percent power, Limiting Conditions for Operation (LCOs) 3.0.3 and 3.7.7 were entered. Both trains of the control room emergency ventilation system (CREVS) were declared inoperable following closure of the tornado dampers that isolate the fresh air intake, for pressurization of the main control room, to the CREVS. The dampers were closed in accordance with plant procedures as a result of each of the tornado warnings and sightings of a tornado in Hamilton County near SQN. After the tornado warnings were downgraded, both trains of the CREVS were subsequently returned to operable status.

## LICENSEE EVENT REPORT (LER)

## TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
Sequoyah Nuclear Plant (SQN), Unit 1							

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

## I. PLANT CONDITIONS

On April 15, 1994, Unit 1 was in Mode 2 at approximately 1 percent reactor thermal power, and Unit 2 was operating in Mode 1 at approximately 100 percent reactor thermal power.

On April 27, 1994, Unit 1 was operating at approximately 48 percent reactor thermal power, and Unit 2 was operating at approximately 100 percent reactor thermal power.

## II. DESCRIPTION OF EVENT

A. Event

On April 15, 1994, at 1240 Eastern daylight time (EDT), and on April 27, 1994, at 1500 FDT, Limiting Conditions for Operation (LCOs) 3.0.3 and 3.7.7 were entered. Both trains of the control room emergency ventilation system (CREVS) (EIIIS Code VI) were declared inoperable following closure of the tornado dampers that isolate the fresh air intake, for pressurization of the main control room, to the CREVS. The dampers were closed in accordance with the plant abnormal operating instructions (AOIs) as a result of each of the tornado warnings and sightings of a tornado in Hamilton County near SQN. After the tornado warnings were downgraded, both trains of the CREVS were returned to operable status and the LCOs were exited.

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

None.

C. Dates and Approximate Times of Major Occurrences

April 15, 1994 at 1220 EDT	The shift operations supervisor (SOS) was notified that a tornado warning was issued for East Tennessee and that a tornado had been spotted in Hamilton County near SQN. Implementation of the AOI concerning tornados began.
April 15, 1994 at 1240 EDT	LCO 3.0.3 was entered upon closure of the tornado dampers. Closure of the tornado dampers isolates the fresh air intake to the CREVS, resulting in both trains of CREVS being inoperable.
April 15, 1994 at 1305 EDT	In accordance with 10 CFR 50.72, NRC was notified of the tornado warning.
April 15, 1994 at 1313 EDT	The SOS was notified that the tornado warning was downgraded to a tornado watch. Operations began recovery from the AOI.

**LICENSEE EVENT REPORT (LER)**  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						PAGE (3)			
		SEQUENTIAL		REVISION							
		YEAR	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER				
Sequoyah Nuclear Plant (SQN), Unit 1	0500032794	--	0	0	6	--	0	0	0	3	OF 04

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

April 15, 1994  
at 1345 EDT Both trains of CREVS were returned to operable status, and LCO 3.0.3 was exited.

April 27, 1994  
at 1438 EDT The SOS was notified that a tornado warning was issued for East Tennessee and that a tornado had been spotted in Hamilton County near SQN. Implementation of the AOI concerning tornados began.

April 27, 1994  
at 1500 EDT LCOs 3.0.3 and 3.7.7 were entered upon closure of the tornado dampers.

April 27, 1994  
at 1532 EDT In accordance with 10 CFR 50.72, NRC was notified that a tornado had been spotted in the area near SQN.

April 27, 1994  
at 1535 EDT The SOS was notified that the tornado warning was downgraded to a thunderstorm watch. Operations began recovery from the AOI.

April 27, 1994  
at 1547 EDT Both trains of CREVS were returned to operable status, and LCOs 3.0.3 and 3.7.7 were exited.

D. Other Systems or Secondary Functions Affected

None.

E. Method of Discovery

The SOS was notified of the tornado warning and that a tornado had been sighted in Hamilton County near SQN.

F. Operator Actions

Operations personnel closed the tornado dampers in accordance with AOIs, and the appropriate LCOs were entered. After the downgrading of the tornado warning to a tornado watch, the CREVS was returned to operable status, and the LCOs were exited.

G. Safety System Response

No safety system response was required.

III. CAUSE OF EVENT

- A. The direct cause of this event was the tornado warning and the sighting of a tornado moving toward SQN.
- B. The root cause of this event is competing design requirements.

## LICENSEE EVENT REPORT (LER)

## TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						PAGE (3)										
		SEQUENTIAL		REVISION														
		YEAR	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER											
Sequoyah Nuclear Plant, Unit 1		05	00	03	27	94	--	0	0	6	--	0	0	0	4	OF	0	4

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

## IV. ANALYSIS OF EVENT

The CREVS is designed such that during an accident, (1) the ambient air temperature does not exceed the allowable air temperature for continuous duty rating of the equipment and instrumentation located within the main control room habitability zone (MCRHZ) and (2) the radiation exposure to personnel occupying the MCRHZ will remain within the regulatory guidelines.

The closure of the dampers mitigates the consequence of a depressurization event that could be caused by a tornado. The closure of the tornado dampers does not impair the cooling functions provided by the ventilation system. During the period of time that the dampers are closed, the control building envelope is cooled by an internally contained recirculation system. Hence, cooling is not jeopardized. Although the MCRHZ cannot be pressurized with the tornado dampers closed, it is assumed in the design basis that, during a tornado, design basis events involving releases of high radiation do not occur. Because the LCO 3.0.3 entry (tornado warning duration) is of a relatively short duration, part of a preplanned sequence in accordance with plant procedures, and the system could be manually realigned to perform its intended function, this event did not adversely affect the health and safety of the public or plant personnel.

## V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions

Not applicable - the entry into LCO 3.0.3 was part of a preplanned sequence of activities in accordance with AOIs during a tornado warning.

B. Corrective Action to Prevent Recurrence

A technical specification change is being pursued to allow closure of the tornado dampers, when a tornado warning has been issued, without requiring entry into LCO 3.0.3 for the CREVS.

## VI. ADDITIONAL INFORMATION

A. Failed Components

None.

B. Previous Similar Events

There has been one previous reportable similar event (LER 50-327/92022) associated with the closure of tornado dampers as a result of a tornado warning.

## VII. COMMITMENTS

None.