

# WOLF CREEK

NUCLEAR OPERATING CORPORATION

John A. Bailey  
Vice President  
Operations

May 18, 1992

NO 92-0145

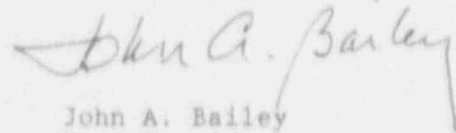
U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station P1-137  
Washington, D. C. 20555

Subject: Docket No. 50-482: Licensee Event Report 92-009-00

Gentlemen:

The attached Licensee Event Report (LER) is being submitted pursuant to 10 CFR 50.73 (a) (2) (i) concerning a Technical Specification violation that caused two independent trains of a system to be inoperable.

Very truly yours,



John A. Bailey  
Vice President  
Operations

JAB/aem

Attachment

cc: A. T. Howell (NRC), w/a  
R. D. Martin (NRC), w/a  
G. A. Pick (NRC), w/a  
W. D. Reckley (NRC), w/e

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O. Box 411 / Burlington, KS 66839 / Phone: (316) 364-8831

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## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) **Wolf Creek Generating Station**      DOCKET NUMBER (2) **05000482**      PAGE (3) **1 of 05**

TITLE (4) **Technical Specification Violation - Failure Of Humidity Sensors Results In Inoperability Of Both Trains Of The Control Room Emergency Ventilation System**

EVENT DATE (5)			LER NUMBER (6)		REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)			
MONTH	DAY	YEAR	YEAR	SUCCESIONAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	DOCKET NUMBER (9)		
04	17	92	92	009	000	05	18	92	05000		

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

OPERATING MODE (9)	20.402(b)	20.405(a)	50.73(a)(2)(iv)	73.71(b)
1				
POWER LEVEL (11): 100	20.405(a)(1)(i)	50.98(c)(1)	50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.98(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)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Steve G. Wideman - Supervisor Licensing	AREA CODE: 316 364-8831

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NRC
X	V.I.M.E.		X1919	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)       NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 17-18 single-space typewritten lines) (16)

On April 17, 1992, at 1412 CDT, Control Room operators were informed by Instrumentation and Controls personnel that they were unable to calibrate the relative humidity sensors for both Control Room pressurization filter absorber units. It was subsequently determined that with the sensors unable to accurately sense relative humidity and therefore unable to control electric duct heaters upstream of the sensors, both trains of the Control Room Emergency Ventilation System (CREVS) should be considered inoperable. The heaters are designed to heat the influent air stream to reduce its relative humidity before it reaches the filters and absorber units. Entry was made into Technical Specification 3.0.3. Both trains of the CREVS were returned to operable status by 1923 CDT.

This event resulted from a failure of the relative humidity sensors in the Control Room pressurization filter absorber units. The root cause of this failure was attributed to normal wear of the sensor. To preclude future inoperability of both relative humidity sensors, the sensors will be replaced every 36 months. If it is determined feasible to bypass the relative humidity sensors to allow continuous operation of the heaters, the replacement of the sensors every 36 months will be discontinued.

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TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Wolf Creek Generating Station	0500048292	-	009	-	00	02 of 05

TEXT (If more space is required, use additional NRC Form 308A's) (17)

**INTRODUCTION**

On April 17, 1992, at 1412 CDT, Control Room operators were informed by Instrumentation and Controls personnel that they were unable to calibrate the relative humidity sensors [VI-ME] for both Control Room pressurization filter absorber units. It was subsequently determined that with the sensors unable to accurately sense relative humidity and therefore unable to control electric duct heaters upstream of the sensors, both trains of the Control Room Emergency Ventilation System (CREVS) [VI] should be considered inoperable. Because Technical Specification 3.7.6 does not contain an action statement for having both CREVS trains inoperable while in Mode 1, Power Operation, through Mode 4, Hot Shutdown, Control Room operators entered into Technical Specification 3.7.3. This event is being reported in accordance with 10 CFR 50.71(a)(2)(i)(B) as a condition prohibited by Technical Specifications.

**DESCRIPTION OF EVENT**

The CREVS ensures that the Control Room will remain habitable for operators during and following all credible accident conditions. Signals which are initiated upon indication of an accident, high radiation in the influent, or chlorine gas in the influent will automatically isolate the Control Building supply and exhaust systems [VI]. Each of these signals will automatically bypass portions of the Control Building Heating, Ventilation and Air Conditioning System [VI] flow through the associated particulate filter-charcoal absorber train for cleanup and to initiate operation of the CREVS. In part, the CREVS draws in outside air and processes it through a Control Room pressurization filter absorber unit for cleanup and dilution with air already existing in the Control Building. This process maintains the Control Room under a positive pressure and ensures exfiltration from the Control Room, thus preventing any unprocessed contaminants from entering the Control Room.

Technical Specification 3.7.6, which is applicable in all modes, requires two independent CREVS trains to be operable. For Mode 1, Power Operation, through Mode 4, Hot Shutdown, with one CREVS train inoperable, Technical Specification 3.7.6 requires restoration of the inoperable train to operable status within seven days or be in at least Hot Standby within the next six hours and Cold Shutdown within the following 30 hours.

**LICENSEE EVENT REPORT (LER)  
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TEXT (If more space is required, use additional NRC Form 305A's) (17)

The Control Room pressurization filter absorber units [Figure 1] consist of, in part, moisture absorbers [VI-MSR], heaters [VI-EHTR], high-efficiency particulate air filters [VI-FLT] and charcoal absorber units [VI-ABS]. The heaters are designed to heat the influent air stream to reduce its relative humidity before it reaches the filters and absorber units. This ensures that the filters and absorbers are not damaged or plugged and that they retain their efficiency. The design function of the charcoal absorber units is to remove gaseous iodine from the air stream prior to entering the Control Building. A relative humidity sensor is provided prior to the filters in each train to sense relative humidity and to control the electric duct heaters upstream of the sensor.

On April 17, 1992, at 1412 CDT, Instrumentation and Controls personnel informed Control Room operators that they were unable to calibrate the relative humidity sensors for both Control Room pressurization filter absorber units. Instrumentation and Controls personnel were attempting to calibrate the relative humidity sensors during the performance of procedure INC L-1000, "Calibration of Miscellaneous Loops". It was subsequently determined that with the sensors unable to accurately sense relative humidity and therefore unable to control electric duct heaters upstream of the sensors, both trains of the CREVS should be considered inoperable. Therefore, Technical Specification 3.0.3 was entered and steps were taken to replace the defective relative humidity sensors.

At 1529 CDT, Instrumentation and Controls personnel successfully removed and replaced the relative humidity sensor in the "A" Train Control Room pressurization filter absorber unit and calibrated the relative humidity sensor in accordance with procedure INC L-1000. Technical Specification 3.0.3 was exited and Technical Specification 3.7.6 was entered for having one independent CREVS train inoperable. At 1923 CDT, a new relative humidity sensor was installed and calibrated in the "B" Train Control Room pressurization filter absorber unit and Technical Specification 3.7.6 was exited.

**ROOT CAUSE AND CORRECTIVE ACTIONS**

This event resulted from a failure of the relative humidity sensors in the Control Room pressurization filter absorber units. The root cause of this failure was attributed to normal wear of the sensor. To preclude future inoperability of both relative humidity sensors, the sensors will be replaced every 36 months. Procedure INC L-1000 is conducted every eighteen months and had been successfully conducted on October 19, 1990 for both sensors. An engineering evaluation request has been initiated to determine if it is feasible to bypass the relative humidity sensors to allow continuous operation of the heaters. If it is determined feasible to bypass the relative humidity sensors, the replacement of the sensors every 36 months will be discontinued.

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Wolf Creek Generating Station	050004829	2	009	00	04 of 05

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

**ADDITIONAL INFORMATION**

At the time of this event, the plant was in Mode 1, Power Operation, at 100 percent Reactor power.

The relative humidity sensors were manufactured by General Eastern Corporation, Model 411.

Although there have been previous similar occurrences of entering Technical Specification 3.0.3 because of inoperability of both trains of the CREVS, inoperability of the CREVS in these previous occurrences was not related to the failure of the relative humidity sensors.

Additionally, had an actuation of the CREVS occurred, both trains of the CREVS were available to provide pressurization and exfiltration of the Control Room. Therefore, at no time did conditions develop that may have posed a threat to the health and safety of the public. There was no damage to plant equipment or release of radioactivity as a result of this event.

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)		PAGE (5)
Wolf Creek Generating Station	0   5   0   0   0   4   8   2   9   2	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
		0   0   9	- 0   0	0   5
of 0   5				

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

Figure 1

