NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

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Wolf Creek Generating Station	0 5 0 0 0 4 8 2	1 OF 0 3

TITLE (4)

Reactor Trip and Feedwater Isolation and Auxiliary Feedwater Actuation Events

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)
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0 7	1 0	8 5	8 5	0 5 0	0 0	0 8	0 6	8 5		0 5 0 0 0

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)				
1	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)	
POWER LEVEL (10)	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)	
0 1 1	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)	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
Merlin G. Williams - Superintendent of Regulatory, Quality and Administrative Services	AREA CODE 3 1 6 — 3 6 4 - 8 8 3 1

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	
B	S J	F C V	C 6 3 5	N							

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 fifteen single-space typewritten lines) (16)

On July 10, 1985, three events occurred due to the same cause - excessive leakage through Main Feedwater Control valve "B". At 0547, 0813 and 1321 CDT Hi-Hi water level in Steam Generator "B" initiated a Feedwater Isolation, Main Turbine trip and Main Feedwater Pump (MFP) trips. The MFP trips initiated Auxiliary Feedwater Actuation and Steam Generator Blowdown and Sample Isolation.

At the time of the 0547 and 1321 CDT events, the plant was in Mode 2, Startup, at a reactor power level of approximately four (4) percent. Following the Feedwater Isolations, reactor power was manually reduced to approximately two (2) percent.

At the time of the 0813 CDT event, the plant was in Mode 1, Power Operation, at a reactor power level of approximately eleven (11) percent. Following this Feedwater Isolation, a Lo-Lo water level condition in Steam Generator "C" caused a reactor trip at 0815 CDT.

The causes of these events were an improper zero adjustment on the "B" Main Feedwater Control valve positioner and a loose connection between the valve and the valve operator. These conditions prevented the valve from fully closing and have been resolved.

All required Engineered Safety Features and Reactor Protection System equipment functioned properly. At no time during these events did conditions develop which could have posed a threat to the health or safety of the public.

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

On July 10, 1985, at 0547, 0813 and 1321 CDT, events occurred as a result of excessive leakage through Main Feedwater Control valve [SJ-FCV]"B". On each occasion, when the "B" Main Feedwater Control valve isolation valve [SJ-ISV] was opened, water level in Steam Generator [AB-SG]"B" increased rapidly. Efforts to limit the water level increase were unsuccessful and in each case the Hi-Hi water level setpoint was reached. This initiated Feedwater Isolation (FWIS), Main Turbine trip and Main Feedwater Pump (MFP) turbine trips. The MFP trips initiated an Auxiliary Feedwater Actuation and a Steam Generator Blowdown and Sample Isolation.

At the time of the 0547 CDT event, the plant was in Mode 2, Startup, at approximately four (4) percent reactor power. Following the Feedwater Isolation, reactor power was manually reduced to approximately two (2) percent. All required Engineered Safety Features equipment responded properly and the actuated systems were returned to normal configurations in accordance with plant procedures at approximately 0600 CDT. At that time it was felt that the leakage through "B" Main Feedwater Control valve, while excessive, could be accommodated at a higher reactor power level where required feedwater flows are higher.

At the time of the 0813 CDT event, the plant was in Mode 1, Power Operation, and reactor power level had been increased to approximately eleven (11) percent. As the "B" Main Feedwater Control valve was unisolated, water level in Steam Generator "B" again rapidly increased to the Hi-Hi level setpoint initiating a FWIS. Following the Feedwater Isolation, water level in Steam Generator "C" decreased to the Lo-Lo level setpoint before reactor power could be reduced to be consistent with Auxiliary Feedwater flow and a reactor trip was initiated at 0815 CDT. All required Engineered Safety Features and Reactor Protection System equipment functioned properly. The actuated systems were returned to normal configurations in accordance with plant procedures at approximately 0845 CDT.

Subsequent investigation revealed that the Main Feedwater Control valve positioner was maintaining the valve approximately 25 percent open while the valve should have been closed. This condition was caused by an improper high setting for the positioner zero adjustment. The positioner was recalibrated and verified to properly stroke the valve.

At the time of the 1321 CDT event, the plant was in Mode 2, at approximately four (4) percent reactor power. As the "B" Main Feedwater Control valve was slowly unisolated, water level in Steam Generator "B" again rapidly increased resulting in a FWIS when the Hi-Hi level setpoint was reached. Following the Feedwater Isolation, reactor power was manually reduced to approximately two (2) percent. All required Engineered Safety Features equipment responded properly.

Further investigation identified that in addition to the positioner problem previously corrected, the connection between the valve operator and the valve stem had loosened allowing the valve to remain slightly over one half inch open when the valve operator was in the closed position. The cause of

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

this condition was a jam nut which had loosened. This connection was adjusted and tightened, and the valve and operator were demonstrated to function properly. Subsequent use of the valve confirmed that the excessive leakage problem was resolved.

All of the Main Feedwater Control valves were inspected for similar conditions and no other problems were identified. The position of the jam nut relative to the stem has been marked, and will be periodically monitored to verify that the problem does not recur. Additionally, the procedure covering valve positioner adjustment is being modified to include a specific check for valve seat versus disk position following any adjustments of the positioner.

The Main Feedwater Control valves and valve operators were supplied by Copes-Vulcan Inc. and have Bailey Controls Positioners. There have been no previous similar events related to the positioning of these valves.

There was no damage to plant equipment or release of radioactivity as a result of these events. At no time did conditions develop which could have posed a threat to the health or safety of the public.

KANSAS GAS AND ELECTRIC COMPANY

GLENN L. KOESTER
VICE PRESIDENT - NUCLEAR

August 6, 1985

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

Mr. R.P. Denise, Director
Wolf Creek Task Force
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

KMLNRC 85-191
Re: Docket No. STN 50-482
Subj: Licensee Event Report 85-050-00

Dear Gentlemen:

The enclosed Licensee Event Report is submitted pursuant to 10 CFR 50.73(a) (2) (iv) concerning an Engineered Safety Feature actuation.

If you have any questions concerning this matter, please contact me or Mr. Otto Maynard of my staff.

Yours very truly,

for Glenn L. Koester
Vice President - Nuclear

GLK:dab

Enclosure

xc: PO'Connor (2), w/a
JCummins, w/a

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