

WOLF CREEK

NUCLEAR OPERATING CORPORATION

John A. Bailey
Vice President
Nuclear Operations

April 19, 1990

NO 90-0126

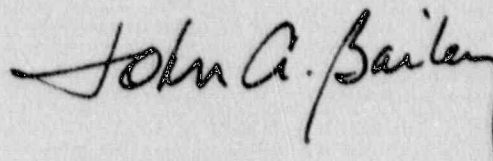
U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Subject: Docket No. 50-482: Licensee Event Report 90-003-00

Gentlemen:

The attached Licensee Event Report (LER) is being submitted pursuant to 10 CFR 50.73(a)(2)(iv) concerning an Engineered Safety Features actuation.

Very truly yours,



John A. Bailey
Vice President
Nuclear Operations

JAB/jra

Attachment

cc: R. D. Martin (NRC), w/a
D. Persinko (NRC), w/a
D. V. Pickett (NRC), w/a
M. E. Skow (NRC), w/a

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Wolf Creek Generating Station										DOCKET NUMBER (2) 0 5 0 0 0 4 8 2 1 OF 0 3										PAGE (3) 1 OF 0 3																																			
TITLE (4) Control Room Ventilation Isolation and Containment Purge Isolation Caused By High Gaseous Activity During Containment Vent																																																							
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 3			2 0			9 0			9 0			0 0			3			0 0			0 4			1 9			9 0																0 5 0 0 0 0												
OPERATING MODE (9) 6									THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																																														
POWER LEVEL (10) 1 0									20.402(b)									20.406(e)									<input checked="" type="checkbox"/> 50.73(a)(2)(iv)									73.71(b)																			
									20.406(a)(1)(i)									50.36(e)(1)									50.73(a)(2)(v)									73.71(c)																			
									20.406(a)(1)(ii)									50.36(e)(2)									50.73(a)(2)(vii)									OTHER (Specify in Abstract below and in Text, NRC Form 366A)																			
									20.406(a)(1)(iii)									50.73(a)(2)(i)									50.73(a)(2)(viii)(A)																												
									20.406(a)(1)(iv)									50.73(a)(2)(ii)									50.73(a)(2)(viii)(B)																												
20.406(a)(1)(v)									50.73(a)(2)(iii)									50.73(a)(2)(ix)																																					
LICENSEE CONTACT FOR THIS LER (12)																																																							
NAME Merlin G. Williams - Manager Plant Support																				TELEPHONE NUMBER 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 NRC			CAUSE			SYSTEM			COMPONENT			MANUFACTURER			REPORTABLE TO NRC																												
SUPPLEMENTAL REPORT EXPECTED (14)																				EXPECTED SUBMISSION DATE (15)										MONTH DAY YEAR																									
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)																				<input checked="" type="checkbox"/> NO																																			

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

On March 20, 1990, at 0229 CST, shortly after initiation of a containment vent, a Containment Purge Isolation Signal and Control Room Ventilation Isolation Signal were generated by signals from the gaseous channels of the Containment Purge Radiation Monitors, GT RE-22 and GT RE-33. All required Engineered Safety Features equipment responded properly to the signals. After confirming there were no unusual radiological conditions in containment, the vent was restarted at 0925 CST and completed at 1040 CST without further incident.

Further investigation to identify the root cause yielded the following: The high gaseous radioactivity indicated by GT RE-22 and GT RE-33 was the result of a localized accumulation of gaseous activity in the containment ventilation exhaust ductwork. The accumulation occurred as a result of a temporary vent line installed between the pressurizer relief tank manual vent valve and the ductwork to facilitate Reactor Coolant System venting. To prevent recurrence, a caution is being added to the operating procedure to ensure the vent valve is closed when the ventilation system is secured.

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20546, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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Wolf Creek Generating Station

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

INTRODUCTION

On March 20, 1990, at 0229 CST, shortly after initiation of a containment building [NH] vent, a Containment Purge Isolation Signal (CPIS) and a Control Room Ventilation Isolation Signal (CRVIS) were generated by signals from the gaseous channels of the Containment Purge Radiation Monitors [IL-MON], GT RE-22 and GT RE-33. All required Engineered Safety Features (ESF) equipment responded properly to the signals. This event is being reported pursuant to 10 CFR 50.73(a)(2)(iv) as an unplanned actuation of ESF equipment.

DESCRIPTION OF EVENT

At the time of this event, the unit was in Mode 6, Refueling, with the reactor pressure vessel [AB-RPV] head removed, in the initial phase of Refueling Outage IV. At 0226 CST on March 20, 1990, the Control Room operators began venting the containment building for pressure reduction in accordance with approved procedures. Shortly after the containment purge exhaust dampers [VA-DMP] were opened and the exhaust fan [VA-FAN] started, high gaseous radioactivity was detected by radiation monitors GT RE-22 and GT RE-33 resulting in a CPIS and CRVIS. This ESF actuation signal caused the exhaust dampers to reclose and the exhaust fan to trip. All required ESF equipment responded properly to the actuation signal.

Subsequent investigation revealed that the readings on the Containment Atmosphere Radiation Monitors [IL-MON] were consistent with plant conditions - i.e., there were no indications of abnormal activity levels. A gaseous grab sample of containment atmosphere was obtained for analysis. The results of the sample analysis indicated activity levels within the expected range. The filters in GT RE-22 and GT RE-33 were replaced and analyses of the removed particulate and iodine filters were performed. No particulates were detected and the iodine activity level was only slightly higher than expected. Following these actions, which confirmed that there were no unusual radiological conditions in containment, a new Containment Purge Permit was issued and venting of the containment building was resumed at 0925 CST on March 20, 1990. The venting was secured at 1040 CST with no further incidents occurring during the pressure reduction.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

Further investigation to identify the root cause of this event was conducted. The high gaseous radioactivity indicated by GT RE-22 and GT RE-33 was the result of a localized accumulation of activity in the containment ventilation exhaust ductwork. A temporary vent line had been installed connecting the pressurizer relief tank [AB-TK] manual vent valve to the containment ventilation exhaust ductwork upstream of the sample points for GT RE-22 and GT RE-33. This line was installed to allow venting of the Reactor Coolant System [AB] in accordance with procedure. Because the ventilation system was secured, a concentrated accumulation of activity developed in the ductwork. When the containment purge exhaust dampers were opened, this accumulation of gas was pumped through the sampling skid for the Containment Purge Radiation Monitors, and the concentration of gas was sufficient to exceed the bistable setpoint for the monitors, resulting in a CPIS and CRVIS.

In order to prevent recurrence, a caution will be added to operating procedure GEN 00-007, "Reactor Coolant System Drain Down", to alert the Control Room operators of the potential for an accumulation of gaseous activity and to provide guidance on closure of the manual vent valve if the ventilation exhaust system is secured. This procedure revision will be completed by July 31, 1990.

ADDITIONAL INFORMATION

No release limits were exceeded during this event. All ESF equipment functioned properly, thus preventing the development of conditions that could have posed a threat to the health and safety of the public.

There have been no previous similar occurrences.