

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Otto L. Maynard
Vice President Plant Operations

April 20, 1993
WO 93-0085

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 93-005-00

Gentlemen:

The attached Licensee Event Report (LER) is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) concerning a Technical Specification violation.

Very truly yours,



Otto L. Maynard
Vice President
Plant Operations

OLM/jan

Attachment

cc: W. D. Johnson (NRC), w/a
J. L. Milhoan (NRC), w/a
G. A. Pick (NRC), w/a
W. D. Reckley (NRC), w/a

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LICENSEE EVENT REPORT (LER)

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TITLE (4)

Failure to perform "As Found" Local Leak Rate Test

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	RE-BOOK NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
0 3	2 2	9 3	9 3	0 0 5	0 0	0 4	2 0	9 3			0 5 0 0 0

OPERATING MODE (9) E	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)(i)			73.71(b)		
	20.405(a)(1)(i)			50.36(a)(1)			50.73(a)(2)(ii)			73.71(c)		
	20.405(a)(1)(ii)			50.36(a)(2)			50.73(a)(2)(iii)			(OTHER: Specify in Abstract below and in Text NRC Form 308A)		
	20.405(a)(1)(iii)			50.73(a)(2)(iv)								
	20.405(a)(1)(iv)			50.73(a)(2)(v)								
20.405(a)(1)(v)			50.73(a)(2)(vi)									
POWER LEVEL (10) 1 0	20.405(a)(1)(vi)			50.73(a)(2)(vii)			50.73(a)(2)(viii)					

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Mr. Kevin Moles	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)

YES (if yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	X				

ABSTRACT (1,000 to 1,400 spaces; -X approximately fifteen single space typewritten lines) (16)

On March 22, 1993, a Wolf Creek Nuclear Operating Corporation (WCNOC) maintenance electrician was performing Work Request (WR) 04447-92 to replace or refurbish the actuator for Centrifugal Charging Pumps to Regenerative Heat Exchanger Containment Isolation Valve BG HV-8105 at Wolf Creek Generating Station (WCGS). This electrician skipped a step in the Supplemental Work Instructions and removed the valve's actuator before a pre-replacement ("as found") Local Leak Rate Test (LLRT) could be performed and verified. On March 23, 1993, Results Engineering personnel discovered that the actuator had been removed prior to the required "as found" LLRT being performed. The Control Room was notified and a Performance Improvement Request (PIR) was initiated to determine a root cause and proper corrective action.

Prior to the event, the plant was in MODE E (i.e., no fuel in the vessel), Reactor Coolant System (RCS) temperature was less than 100 degrees Fahrenheit, RCS vented (0 psig), and reactor vessel water level was at Mid-Loop to perform various maintenance activities and to complete eddy current testing on the "B" Steam Generator.

The root cause of this event has been attributed to cognitive personnel error on the part of a licensee maintenance electrician (non-licensed). The first step in the work instructions that pertained to verifying that a "PRE Replacement LLRT has been performed" was clear.

Areas addressed for improvement include the proper review of work instructions prior to the commencement of work and ensuring that adequate attention is given to job prerequisites and sign-offs.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 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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TEXT (If more space is required, use additional NRC Form 386A's) (17)

PLANT CONDITIONS AT THE TIME OF EVENT:

Plant Operational Condition: Mode E, (i.e., no fuel in the vessel)
RCS Pressure: 0 psig (vented)
RCS Temperature: < 100 degrees Fahrenheit
RCS Water Level: Previously drained to Mid-Loop

DESCRIPTION OF EVENT:

On March 23, 1993, at 2355 CST, the Shift Supervisor was notified by Results Engineering that an "as found" Local Leak Rate Test (LLRT) for Containment Isolation Valve BG HV-8105 [JM-ISV] was not performed before the valve's actuator was removed. Results Engineering was required to perform Technical Specification Surveillance Procedure, STS PE-017, "Local Leak Rate Test," Revision 8, which states in step 2.4.2.A (2) that "An AS FOUND test is required.....prior to conducting any maintenance that can affect valve leakage characteristics." However, valve maintenance was commenced on March 22, 1993, prior to verifying this test was done. Failure to perform an "as found" LLRT on valve BG HV-8105 is a condition prohibited by Technical Specifications 4.0.5 and 4.6.1.2 (per the intent of ASME Code Section XI and the requirements of 10 CFR 50, Appendix J) and therefore is reportable per 10 CFR 50.73 (a)(2)(i)(B).

On March 22, 1993, an electrician began Work Request (WR) 04447-92 to replace or refurbish the actuator for Centrifugal Charging Pumps to Regenerative Heat Exchanger Containment Isolation Valve BG HV-8105. The written work instructions were to remove, replace, setup and test per the work package's Supplemental Work Instructions. As stated in the Supplemental Work Instructions: "These instructions are written to remove the installed actuator and replace it with a new reconfigured one. Reference: PMR 04357. This work is to be performed only after completion of the "As Found" Votes test performed on WR # 04446-92."

The electrician did not notice that the first step of the attached Supplemental Work Instructions, which verifies that the pre-replacement ("as found") LLRT was performed, was not signed off and proceeded to remove the actuator. The new actuator was documented on WR 04447-92 as installed on March 23, 1993.

On March 23, 1993, the LLRT Coordinator for the Sixth Refueling Outage was working near valve BG HV-8105 and noticed that the valve's actuator had been removed. He knew that an LLRT had not been performed on the valve. The Control Room was notified on March 23, 1993, at 2355 CST.

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ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630), 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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TEXT (If more space is required, use additional NRC Form 366A's) (17)

On March 24, 1993, Results Engineering confirmed with the electrician that an "as found" LLRT was not performed on valve BG HV-8105 prior to the actuator being removed. Subsequently, the electrician signed off on step one of the Supplemental Work Instructions to signify that the required pre-replacement LLRT had not been performed and that Performance Improvement Request (PIR) # 93-0228 was written.

Wolf Creek Nuclear Operating Corporation (WCNOC) committed in procedure KGP-1265, "Inservice Inspection Program," to comply with American Society of Mechanical Engineers (ASME) Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components". Wolf Creek Technical Specification 4.6.1.2, "Containment Leakage Surveillance Requirements," requires that the Containment leakage rates be demonstrated and determined in conformance with the criteria specified in Appendix J of 10 CFR 50, Section III.C, using the methods and provisions of American National Standards Institute (ANSI) N45.4-1972. Appendix J of 10 CFR 50, requires that each valve to be tested shall be closed by normal operation, and "as found" data on leakage be taken without any preliminary exercising or adjustments.

Also, in resolution of NRC Inspection Report 87-06 Unresolved Item 482/8706-02, WCNOC committed to perform "as found" LLRTs prior to conducting any maintenance that could affect valve leakage characteristics. Surveillance procedure STS PE-017, "Local Leak Rate Test," Revision 6, included this requirement.

Taking "as found" LLRT data meets the intent of ASME Code Section XI and fulfills the requirements of 10 CFR 50, Appendix J for Type "C" (in this case) LLRTs. Compliance with these provisions is necessary to meet Technical Specifications 4.0.5 and 4.6.1.2 and the requirements of WCGS Operating License, NPP - 42.

ROOT CAUSES AND CONTRIBUTING FACTORS

Electrical Maintenance Management concluded that this event was caused by cognitive personnel error. The electrician involved missed the first step in the Supplemental Work Instructions. The individual was focused on the steps in the work instructions that applied to his work activity, and incorrectly proceeded to remove the actuator from valve BG HV-8105.

CORRECTIVE ACTIONS:Corrective Actions Completed

Results Engineering notified the Control Room, on March 23, 1993, at 2355 CST. A Reportability Evaluation Request (RER) had been initiated at 1900 CST that same day to determine if the condition was potentially reportable to the Nuclear Regulatory Commission. Results Engineering also initiated on March 23, 1993, Corrective Action

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 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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TEXT (if more space is required, use additional NRC Form 306A's) (17)

Program document PIR # MA 93-0228 to investigate the root cause, actions leading to the event, and any contributing factors.

On March 23, 1993, the Electrical Maintenance Supervisor met with Electrical Maintenance personnel and informed them that an "as found" LLRT was not performed on valve BG HV-8105 before the actuator was removed, and that a PIR and a RER had been generated due to this oversight. The electricians were reminded of the importance of taking time to do paperwork properly, including reviewing work package Supplemental Work Instructions and understanding what job prerequisites must be met and signed off before commencing work.

Future Corrective Action

"Positive Discipline" for the individual involved in this event will include making a presentation to his peers in Electrical Maintenance on how the event occurred and recommendations to help prevent this type of error in the future. The presentation will be made by June 18, 1993.

Safety Analysis

Per Updated Safety Analysis Report (USAR) Figure 6.2.4-1, valve BG HV-8105 is a three inch valve in a three inch charging line for the Chemical and Volume Control System (CVCS) [CB]. Per USAR Table 9.3-10, this motor-operated gate valve is used in the CVCS operation under normal plant operating (at power) conditions for charging and volume control. Under accident conditions requiring isolation of this charging line, failure of the valve to open (or in this case leakage by) on a Safety Injection Signal would reduce the redundancy for providing isolation of normal charging flow.

During the Fifth Refueling Outage, a Containment Integrated Leak Rate Test was performed at WCGS and Containment integrity proven. Also, during that outage valve BB HV-8105 had three LLRTs performed on it. The final "as left" test was performed on December 28, 1991. All three LLRTs were determined to be acceptable.

Also, the "as left" LLRT on this valve, completed during the current Sixth Refueling Outage, was acceptable. Due to the valve's testing history and proven Containment integrity during the Fifth Refueling Outage, the probability is that an "as found" LLRT on valve BB HV-8105 would have been acceptable.

No safety concerns existed because the "as found" LLRT was not performed. Therefore, the condition did not pose a threat to the health and safety of the public or plant safety.

LICENSEE EVENT REPORT (LER)
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ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-830), 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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Previous Similar Occurrences

Licensee Event Report (LER) 87-033-00 discussed a previous related occurrence in which a position indication/travel limit switch on Containment Isolation Valve EF HV-1, [JM-ISV] was adjusted to correct a position indication anomaly under a troubleshooting work request. During the normal closeout review of the work request it was determined that an LLRT should have been performed prior to restoring the valve to service. This was a failure to perform an "as left" LLRT due to cognitive personnel error by maintenance supervision, who failed to recognize and specify all appropriate retesting requirements to demonstrate valve operability following maintenance. In order to ensure supervisory personnel were aware of LLRT requirements, a letter was issued which outlined "as found" and "as left" testing requirements. In addition, maintenance procedure MGE E00P-02, "Limitorque Adjustments, Repair and Service," was revised to include a prerequisite for properly addressing retest requirements, with special attention to determining the necessity of performing "as found" and "as left" LLRTs.

There have been no previous reportable occurrences of a failure to perform "as found" LLRTs. However, previously NRC unresolved Inspection Item 482/8706-02, discussed above, also involved valve BG HV-8105 (as well as others) "as found" LLRTs.