

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Clay C. Warren
Vice President & Chief Operating Officer

DEC 16 1999

WO 99-0103

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 1999-013-00

Gentlemen:

The enclosed Licensee Event Report (LER) 1999-013-00 is being submitted, pursuant to 10 CFR 50.73(a)(2)(i)(B), regarding Wolf Creek Nuclear Operating Corporation's identification of a missed surveillance required by Technical Specification 4.5.1.1.b.

Attachment I to this letter identifies actions committed to by Wolf Creek Nuclear Operating Corporation in the enclosed LER.

If you should have any questions regarding this submittal, please contact me at (316) 364-4048, or Mr. Michael J. Angus at (316) 364-4077.

Very truly yours,



Clay C. Warren

CCW/rlr

Enclosure
Attachment

cc: J. N. Donohew (NRC), w/e, w/a
W. D. Johnson (NRC), w/e, w/a
E. W. Merschoff (NRC), w/e, w/a
Senior Resident Inspector (NRC), w/e, w/a

IE22

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

**APPROVED BY OMB NO. 3150-0104 EXPIRES
06/30/2001**

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1)
WOLF CREEK GENERATING STATION

DOCKET NUMBER (2)
05000482

PAGE (3)
1 OF 4

TITLE (4)
Missed Surveillance (Technical Specification 4.5.1.1.b) on Accumulator Boron Concentration Verification Due to Inadequate Tracking Mechanism

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV. NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	16	1999	1999	013	00	12	16	1999	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		MODE 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		100%	20.402(b)			20.405(c)			50.73(a)(2)(iv)	73.71(b)
			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)	73.71(c)
			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)	OTHER
			20.405(a)(1)(iii)		X	50.73(a)(2)(i)			50.73(a)(2)(viii)(A)	Voluntary
			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
Michael J. Angus
Manager Licensing and Corrective Action

TELEPHONE NUMBER (Include Area Code)
(316) 364-4077

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

YES	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
-----	---	----	-------------------------------	-------	-----	------

ABSTRACT (16):

On November 16, 1999, a Wolf Creek Nuclear Operating Corporation (WCNOC) Chemistry technician discovered that the accumulator boron concentration on all four accumulators had not been verified since August 26, 1999. The Chemistry Data Management (CDM) system provides worksheets directing performance of this surveillance. The CDM did not perform this function, as expected, to alert Chemistry personnel that the accumulator boron concentration verification surveillance was required. The Chemistry Data Management system was modified in August, 1999. This missed surveillance event is reportable per 10 CFR 50.73 (a) (2) (i) (B) and per NUREG-1022, Revision 1. The root cause is an inadequate tracking mechanism to ensure the Technical Specification surveillance frequency was being met. Boron samples of each accumulator were taken and verified to be within specification limits on November 16, 1999. Verification of completed surveillances was performed, and a manual tracking method was developed to ensure that required surveillances are completed. The manual tracking method will continue to be utilized until the corrective action is complete. The Chemistry Surveillances for Accumulators A, B, C, and D boron will be incorporated into the Surveillance Test Master Cross Reference Database.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)		DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Wolf Creek Generating Station		05000482	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4
			1999	013	00	

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

Plant Conditions Prior to the Event:

Mode -- 1
 Power -- 100 percent
 Temperature -- 586.2 degrees Fahrenheit
 Pressure - 2238.2 pounds per square inch gauge

Basis for Reportability:

Technical Specification Surveillance requirement 4.5.1.1.b requires that each accumulator shall be demonstrated OPERABLE: "At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 70 gallons by verifying the boron concentration of the accumulator solution." On November 16, 1999, a Wolf Creek Nuclear Operating Corporation (WCNOC) Chemistry technician discovered that the accumulator boron concentration on all four accumulators had not been verified since August 26, 1999.

In accordance with NUREG-1022, Revision 1, missed surveillance tests are reportable when the surveillance interval plus allowed surveillance interval extension plus the LCO action statement time are exceeded.

The condition noted existed for longer than the allowed surveillance interval extension and the LCO action statement time of Technical Specification 3.5.1. Therefore, this event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B).

Event Description:

On November 16, 1999, a WCNOC Chemistry technician discovered that the accumulator boron concentration on all four accumulators had not been verified since August 26, 1999. The Chemistry Data Management (CDM) system was developed to provide worksheets directing performance of this surveillance. The CDM did not perform this function, as expected, to alert Chemistry personnel that the accumulator boron concentration verification surveillance was required.

Root Cause:

Performance Improvement Request (PIR) 1999-3666 was initiated to investigate this event and to determine corrective actions. The root cause of this event was determined to be an inadequate tracking mechanism to ensure the Technical Specification surveillance frequency was being met. The Chemistry Data Management (CDM) system was modified in August, 1999. Because the CDM did not function as expected, there was not an adequate tracking method to ensure the Technical Specification surveillance frequency was being met.

In addition, there was not an adequate back-up/manual tracking system to ensure all surveillances were performed as required. The manual tracking system initiated during CDM installation was the only backup for Technical Specification surveillances performed less than once per 31 days. This manual tracking method was a temporary method and was intended for use during the initial installation and testing of CDM.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Wolf Creek Generating Station	05000482	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 4
		1999	013	00	

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

A lack of information validation or verification also contributed to the root cause. Several problems were identified with the new CDM software after implementation. Software program testing had occurred prior to implementation, but the testing was completed before Revision 2 of AP 15D-007, "Computer Software Quality Assurance Requirements," was issued. The program was not re-tested using the newly established criteria. The manual tracking method was prematurely suspended prior to adequately testing the newly-installed software.

Corrective Action Taken:

The Shift Supervisor and Manager Chemistry and Radiation Protection were notified. Boron samples of each accumulator were taken and verified to be within specification limits on November 16, 1999.

Prior to August 1, 1999, the previous Chemistry Data Management system was in service. Verification of the previous CDM analysis was performed during completion of monthly reports for the National Pollutant Discharge Elimination System (NPDES) surveillance and during the annual reports for Offsite Dose Calculation Manual (ODCM) surveillances.

The manual tracking method was reinstated to ensure the Technical Specification, ODCM and NPDES surveillances are completed in accordance with requirements.

Actions to Prevent Recurrence:

Troubleshooting and additional testing, if required, will be performed to determine the cause of the software malfunction. The manual tracking method will continue to be utilized until the corrective action is complete. This action will be complete by January 7, 2000.

The Chemistry Surveillances for Accumulators A, B, C, and D boron will be incorporated into the Surveillance Test Master Cross Reference Database. This corrective action will be implemented by March 14, 2000.

Safety Significance:

Boron samples of each accumulator were taken and verified to be within specification limits on November 16, 1999. Previous CDM analysis was verified, as discussed above, which demonstrates that the boron concentration for the accumulators had not been outside specified limits. Therefore, there is minimal safety significance associated with the missed surveillance.

The boron concentration of accumulators is explicitly assumed in the post-LOCA sub-criticality, hot leg re-circulation switch-over time and re-circulation sump pH calculations. The minimum boron concentration limit is used in the post LOCA boron concentration calculation. The calculation is performed to assure reactor sub-criticality in a post LOCA environment. Of particular interest is the large break LOCA, since no credit is taken for control rod assembly insertion. The maximum boron concentration is used in determining the cold leg to hot leg re-circulation injection switch-over time and minimum sump pH. Therefore, capability to maintain post-LOCA core sub-criticality, minimum

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Wolf Creek Generating Station	05000482	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4
		1999	013	00	

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

boron precipitation time, or minimum sump pH value may be reduced if the boron concentration of accumulators is not within limits. Changes that could occur from dilution or in-leakage could cause a reduction in boron concentration to be below the required limit. However, sampling the water contained in the accumulators after the missed surveillance identified that the accumulator boron concentration remained within limits. This demonstrates that the accumulators have not been diluted since the previous surveillance was performed. Therefore, the missed surveillance does not represent a condition that compromised plant safety.

Other Previous Occurrences:

LERs were reviewed for 1997, 1998, and 1999 for missed surveillances resulting from an inadequate tracking mechanism. This review identified that LER 1999-012-00, "Failure to Perform Technical Specification 3.8.1.1, Action b, Within the Required Time," and LER 1998-010-00, "Installation of Snubber (S/N 14989) with Defective Part Results in Violation of Technical Specification 3.7.8" involved ineffective use of tracking mechanisms.

LIST OF COMMITMENTS

The following table identifies those actions committed to by Wolf Creek Nuclear Operating Corporation (WCNOC) in this document. Any other statements in this submittal are provided for information purposes and are not considered to be commitments. Please direct questions regarding these commitments to Mr. Michael J. Angus, Manager Licensing and Corrective Action at Wolf Creek Generating Station, (316) 364-4077.

COMMITMENT	Due Date/Event
The manual tracking method will continue to be utilized until the corrective action is complete.	April 14, 2000
The Chemistry Surveillances for Accumulators A, B, C, and D boron will be incorporated into the Surveillance Test Master Cross Reference Database.	March 14, 2000
Troubleshooting and additional testing, if required, will be performed to determine the cause of the software malfunction.	January 7, 2000