

Omaha Public Power District

P.O. Box 399 Hwy. 75 - North of Ft. Calhoun Fort Calhoun, NE 68023-0399
402/636-2000

February 25, 1993
LIC-93-0050

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Reference: Docket No. 50-285

Gentlemen:

Subject: Licensee Event Report 93-003 for the Fort Calhoun Station

Please find attached Licensee Event Report 93-003 dated February 25, 1993.
This report is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B). If you
should have any questions, please contact me.

Sincerely,

W. G. Gates

W. G. Gates
Vice President

WGG/jrg

Attachment

c: J. L. Milhoan, NRC Regional Administrator, Region IV
S. D. Bloom, NRC Project Manager
R. P. Mullikin, NRC Senior Resident Inspector
INPO Records Center

LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), 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.

FACILITY NAME (1)

Fort Calhoun Station Unit No. 1

DOCKET NUMBER (2)

05000285

PAGE (3)

1 OF 5

TITLE (4)

Failure to Satisfy Inservice Testing Requirement for Raw Water Pump

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
01	26	93	93	-- 003 --	00	02	25	93	FACILITY NAME	DOCKET NUMBER
										05000
OPERATING MODE (9)		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)	(Specify in Abstract below and in Text, NRC Form 366A)
			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

Scott A. Lindquist, Shift Technical Advisor

TELEPHONE NUMBER (Include Area Code)

(402) 533-6829

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS

SUPPLEMENTAL REPORT EXPECTED (14)

YES

(If yes, complete EXPECTED SUBMISSION DATE)

X

NO

EXPECTED
SUBMISSION
DATE (15)

MONTH DAY YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On November 2, 1992, during the performance of the quarterly inservice test of Raw Water Pump AC-10A, as found data for pump performance was found to be in the Low Alert Range. For test values in the Alert Range, the Inservice Inspection Program Plan requires the testing frequency to be doubled until the cause of the deviation is determined and the condition corrected. On January 25, 1993, maintenance was performed and a post-maintenance test conducted on AC-10A. On January 26, 1993, during review of the performance data from the post-maintenance test, it was realized that the time limit for either performing the next inservice test (in accordance with the requirement for increasing testing frequency) or completing corrective actions, had been exceeded. An evaluation of available data and indications concluded that the pump was able to perform its design function during the period in question.

The root cause of this event was determined to be inadequate administrative controls. The administrative controls to ensure that the test frequency was adjusted or the corrective maintenance process would resolve the problem in a timely manner, were less than adequate.

Corrective actions include a change to the Station Engineering Instruction on surveillance testing, and a change to the Standing Order on conduct of maintenance.

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

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Fort Calhoun Station Unit No. 1	05000285	93	-- 003 --	00	2 OF 5

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

BACKGROUND

The Raw Water (RW) system is primarily designed to provide cooling for the component cooling water system. Four RW pumps are installed in the intake structure pump house to provide screened river water to the component cooling water heat exchangers. The pump discharge piping is arranged as two interconnected headers, valved at the pumps and in the auxiliary building. Each header is designed to accommodate full flow to the component cooling water heat exchangers under all modes of plant operation.

The RW system must remain operable to support the operation of the engineered safeguards in the event of a Design Basis Accident (DBA). In the unlikely event of an accident, the component cooling water system provides cooling for engineered safeguards systems.

The RW system is an American Society of Mechanical Engineers (ASME) Code Class 3 equivalent system. Fort Calhoun Station Technical Specification 3.3(1)(a) requires in-service testing of ASME Code Class 1, Class 2 and Class 3 pumps and valves to be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, except where specific written relief has been granted by the NRC.

Section 9.0 of Surveillance Test OP-ST-RW-3001, "AC-10A Raw Water Pump Quarterly Inservice Test", lists the acceptance criteria for evaluating test results. Section 9.1.1 states, "For test values in the Alert Range, the testing frequency shall be doubled until the cause has been determined and corrected." This acceptance criteria is based on paragraph IWP-3230(a) of the ASME Section XI Code.

EVENT DESCRIPTION

On November 2, 1992, Surveillance Test OP-ST-RW-3001 was performed to ensure operability of RW Pump AC-10A. The results of the test indicated that AC-10A was in the Low Alert Range as delineated by the pump curves referenced in the surveillance test. The Alert Range and Required Action Range limits associated with this curve are derived from ASME Section XI, 1980 Edition, Winter 1980 Addenda, Subsection IWP, Table IWP-3100-2.

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TEXT (If more space is required, use additional copies of NRC Form 365A) (17)

A Maintenance Work Request (MWR 9204479) was initiated by the System Engineer on November 2, 1992, to adjust the lift on the pump impeller and to perform a post-maintenance test to obtain new baseline performance data. All planning and review requirements for the work were completed by November 9, 1992. However, the Maintenance Work Order (MWO) to perform the requested work on RW Pump AC-10A was not scheduled to be completed until January 25, 1993. This schedule was consistent with a common practice to schedule safety related work concurrent with the next required surveillance. On this date, the MWO was performed to adjust the pump impeller lift. A post-maintenance test, SE-EQT-RW-0002, was conducted confirming pump operability and establishing new baseline performance data for subsequent surveillance testing. On January 26, 1993, during the review of the performance data from the post-maintenance test, it was realized that the time limit for either performing the next inservice test (in accordance with the requirement for increasing testing frequency) or completing corrective actions, had been exceeded.

OP-ST-RW-3001 is performed quarterly per the ASME Section XI Code and Fort Calhoun Station's Inservice Inspection Program Plan. Based on doubling the testing frequency and applying a 25% maximum allowable extension (per Technical Specification 3.0.1), the maintenance should have been completed or the pump retested no later than December 29, 1992. Contrary to these requirements, RW Pump AC-10A was not retested nor were repairs performed on the pump until January 25, 1993. The plant was in Mode 1 at a nominal 100% power during this period.

This event was determined to be reportable pursuant to 10 CFR 50.73(a)(2)(i)(B).

SAFETY ASSESSMENT

Failing to perform a Technical Specification required surveillance test requires the component be considered inoperable. The safety significance of this Technical Specification violation is minimal because an evaluation of available data and indications concluded that the pump was able to perform its design function during the period in question. Therefore, although AC-10A should have been declared inoperable on December 29, 1992, per the administrative requirements of the ASME Code, the pump would have been able to provide the required flow in the event of an emergency.

A review was performed to determine the impact on Technical Specification Limiting Conditions for Operation (LCOs) during the time period that AC-10A would have been considered inoperable. Technical Specification 2.4(1)c allows one RW pump to be inoperable indefinitely without applying any LCO action statement if river temperature is below 60 degrees F. River water temperature did not exceed 60 degrees F between December 29, 1992 and January 25, 1993.

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

Technical Specification 2.4(2) states that only two RW pumps may be out of service during power operations. If the operability of one component is not restored within 24 hours, the reactor shall be placed in a hot shutdown condition within 12 hours. A review of the control room log revealed that no other RW pump was inoperable for more than 24 hours during this period.

On January 7, 1993, the safeguard equipment actuation controls for two RW pumps (AC-10B and AC-10D) were removed from the automatic mode for approximately two hours during testing. This condition renders the two pumps inoperable, although they were still available for manual operation with normal and emergency power sources.

Technical Specification 2.7(2)j states that either one of the emergency diesel generators (DG-1 or DG-2) may be inoperable for up to seven days (total for both) during any month, provided the other diesel generator is started to verify operability, shutdown and controls are left in the automatic mode and there are no inoperable engineered safeguards components associated with the operable diesel generator. The emergency power source for two of the four RW pumps (AC-10A and AC-10C) is Diesel Generator DG-1. The emergency power source for the other two RW pumps (AC-10B and AC-10D) is Diesel Generator DG-2. On January 20, 1993, DG-2 was taken out of service for approximately two and a half hours. The normal power supply to RW Pumps AC-10B and AC-10D was available during this time period.

The activities on January 7, 1993 and January 20, 1993, which briefly impacted pumps AC-10B and AC-10D, were violations of Technical Specification requirements in that they occurred during the period that AC-10A should have been considered inoperable. As noted previously, however, an evaluation of available data and indications concluded that AC-10A was able to perform its design function during the period in question. Therefore, the activities on January 7 and January 20 had minimal safety significance.

CONCLUSIONS

A review of ASME Section XI related surveillance tests conducted on the four RW pumps during the past two years determined that, whenever pump performance had been found to be in the Alert Range, MWOs had been scheduled and the work performed within the time constraints imposed by ASME Section XI and the Fort Calhoun Station Technical Specifications. However, it was determined that the Surveillance Test Coordinator had not been provided with specific guidance to increase the frequency of these particular surveillance tests when a pump was found in the Alert Range. Also, maintenance planning and scheduling personnel were unaware of the time dependency requirements for repair of the RW pumps.

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The root cause of this event was determined to be inadequate administrative controls. Although Surveillance Test OP-ST-RW-3001 states the action to be taken when a test value is in the Alert Range, the administrative controls to ensure that the test frequency was adjusted or the corrective maintenance process would resolve the problem in a timely manner, were less than adequate.

CORRECTIVE ACTIONS

The following corrective actions will be completed:

- 1) A step will be provided in Station Engineering Instruction SEI-14 "Surveillance Testing" which instructs the Surveillance Test Coordinator to increase the surveillance testing frequency, as required, whenever an ASME Section XI component's performance test data fall in the Alert Range. This revision will be completed by April 30, 1993. Interim guidance on this issue has been provided to System Engineering personnel.
- 2) Standing Order M-101, "Conduct of Maintenance", will be revised by May 31, 1993, to specify that MWO technical reviews, conducted by the System Engineer, are to include consideration of time constraints associated with completion of the maintenance.

PREVIOUS SIMILAR EVENTS

No similar events, involving failure to increase surveillance testing frequency as a result of as found inservice test data being found in the Alert Range, were identified.