



Omaha Public Power District

444 South 16th Street Mall

Omaha, NE 68102-2247

10 CFR 50.73

LIC-15-0019

January 29, 2015

U.S. Nuclear Regulatory Commission

Attn: Document Control Desk

Washington, DC 20555-0001

Fort Calhoun Station, Unit No. 1

Renewed Facility Operating License No. DPR-40

NRC Docket No. 50-285

Reference 1) Letter from OPPD (L. P. Cortopassi) to NRC (Document Control Desk) dated December 18, 2013 (LIC-13-0178)
2) Letter from OPPD (L. P. Cortopassi) to NRC (Document Control Desk) dated May 2, 2014 (LIC-14-0044)

Subject: Licensee Event Report 2013-014, Revision 2, for the Fort Calhoun Station

Please find attached Licensee Event Report 2013-014, Revision 2. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(v)(B). The revision is being submitted to correct the reporting criteria for this event and minor editorial corrections. There are no new commitments being made in this letter.

If you should have any questions, please contact Terrence W. Simpkin, Manager, Site Regulatory Assurance, at (402) 533-6263.

Sincerely,

Louis P. Cortopassi

Site Vice President and CNO

LPC/epm

Attachment

c: M. L. Dapas, NRC Regional Administrator, Region IV
C. F. Lyon, NRC Senior Project Manager
S.M. Schneider, NRC Senior Resident Inspector

**LICENSEE EVENT REPORT (LER)**

(See Page 2 for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollections.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOF-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.

1. FACILITY NAME

Fort Calhoun Station

2. DOCKET NUMBER

05000285

3. PAGE

1 OF 3

4. TITLE

Unqualified Components used in Safety System Control Circuit

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	18	2012	2013	014 - 02		01	29	2015		05000
										05000

9. OPERATING MODE		11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
5	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)	
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)	
10. POWER LEVEL	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)	
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)	
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)	
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER	
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT

Erick Matzke

TELEPHONE NUMBER (Include Area Code)

402-533-6855

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

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

14. SUPPLEMENTAL REPORT EXPECTED☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO**15. EXPECTED SUBMISSION DATE**

MONTH	DAY	YEAR

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

In October of 2012, condition report 2012-15755 identified that an inadvertent closure of the steam driven auxiliary feedwater recirculation valve, FCV-1369, could cause steam driven auxiliary feedwater pump, FW-10, damage. This scenario could result in pump damage due to dead heading FW-10. FCV-1369 is not a safety related component. The station was shutdown in MODE 5 when this condition was discovered.

The apparent cause was determined to be that the processes used for design and modification of systems, structures, and components do not use explicit and systematic failure mode analysis when adding, deleting, or modifying safety-related system design allowing credible failure modes to not be considered during design and modification.

FCV-1369 has been opened by isolating operating air to the valve, to ensure the operability of FW-10 for the current operating cycle. Appropriate components associated with FCV-1369 will be upgraded or otherwise evaluated to resolve the issue.

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

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollections.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Fort Calhoun Station	05000285	2013	- 014	- 02	2 OF 3

NARRATIVE**BACKGROUND**

Fort Calhoun Station (FCS) is a two-loop reactor coolant system of Combustion Engineering design.

FCS Technical Specification (TS) Section 2.5 states, in part that, two auxiliary feedwater (AFW) trains shall be OPERABLE when Tcold is above 300°F and with one AFW train inoperable for reasons other than Condition A, inoperable steam supply, restore the AFW train to OPERABLE status within 24 hours.

FCS Updated Safety Analysis Report (USAR) Section 9.4.1 states, in part that, FCS has two safety class auxiliary feed pumps, each capable of meeting system requirements and with diverse power sources; one electric motor driven and the other steam turbine driven.

EVENT DESCRIPTION

In October of 2012, condition report (CR) 2012-15755 identified that an inadvertent closure of the steam driven auxiliary feedwater recirculation valve, FCV-1369, could cause steam driven auxiliary feedwater pump, FW-10, damage. FCV-1369 is not a safety related component (CQE). Although FCV-1369 is a fail-open valve, a postulated closure of this valve coincident with a demand closure of HCV-1107B, Steam Generator RC-2A Auxiliary Feedwater Inlet Valve and HVC-1108B, Steam Generator RC-2B Auxiliary Feedwater Inlet Valve, could result in damage to FW-10 due to dead heading. The station was shutdown in MODE 5 when this condition was discovered. This issue was documented in CR 2013-18752.

A review determined that the components in question, although procured as CQE, were not maintained as safety related components. Although the condition only applies to FW-10, during the last operating cycle the motor-driven AFW pump (FW-6) had been taken out of service for testing.

This report is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(v)(B).

CONCLUSION

The apparent cause was determined to be that the processes used for design and modification of systems, structures, and components do not use explicit and systematic failure mode analysis when adding, deleting, or modifying safety-related system design allowing credible failure modes to not be considered during design and modification.

CORRECTIVE ACTIONS**Immediate Corrective Actions**

FCV-1369 has been opened by isolating operating air to the valve to ensure the operability of FW-10 for the current operating cycle.

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

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.

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		2013	- 014	- 02	

NARRATIVE**Long Term Corrective Actions**

Appropriate components associated with FCV-1369 will be upgraded or otherwise evaluated to resolve the issue.

To correct the apparent cause of the issue FCS will upgrade design control procedures by implementing the appropriate procedures from Exelon as part of the integration process.

SAFETY SIGNIFICANCE

The failure of FCV-1369 to open could result in overheating of its associated pump (FW-10). However, with the exception of some maintenance and testing an independent safety related pump (FW-6) was available. In addition, a non-safety related diesel powered AFW pump is available to supply feedwater to the steam generators.

SAFETY SYSTEM FUNCTIONAL FAILURE

This does represent a safety system functional failure in accordance with NEI 99-02, revision 7.

PREVIOUS EVENTS

LER 2006-002