your energy partner
OPPD
Omaha Public Power District
444 South 16th Street Mall
Omaha, NE 68102-2247

LIC-12-0142
September 24, 2012

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Reference: Docket No. 50-285

Subject: Licensee Event Report 2012-017, Revision 0, for the Fort Calhoun Station

Please find attached Licensee Event Report 2012-017, Revision 0, dated September 24, 2012. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(v)(D).

There are no new commitments being made in this letter.

If you should have any questions, please contact me.

Sincerely,

Louis P. Cortopassi
Vice President and CNO

LPC/rjr/epm

Attachment
c: E. E. Collins, Jr., NRC Regional Administrator, Region IV
L. E. Wilkins, NRC Project Manager
J. C. Kirkland, NRC Senior Resident Inspector

NRC FORM 366 (10-2010) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2013

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 Section (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.

LICENSEE EVENT REPORT (LER)

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

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Fort Calhoun Station	05000285	1 OF 3

4. TITLE

Containment Valve Actuators Design Temperature Ratings Below those Required for Design Basis Accidents

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
										05000
07	26	2012	2012	017 -	0	09	24	2012	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE

5

10. POWER LEVEL

0

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☐ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☐ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☒ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER *(Include Area Code)*
Erick Matzke	402-533-6855

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

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

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR
1	11	2013

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

While performing an extent of condition review associated with the adequacy of air operated equipment inside containment to withstand containment main steam line break (MSLB) and loss of coolant accident (LOCA) temperatures, it was discovered that valves HCV-238 (Reactor Coolant System (RCS) Loop 1a Charging Line Stop Valve), HCV-239 (RCS Loop 2a Charging Line Stop Valve), and HCV-240 (Pressurizer RC-4 Auxiliary Spray Inlet Valve) have nitrile based elastomers for the air filter regulator and actuator and may not be able to withstand Containment MSLB and LOCA temperatures. The design temperature limit for the nitrile elastomers used in the valves is 180°F which is acceptable for the normal operating conditions inside Containment of 120°F. However, during the MSLB and LOCA accident the temperature inside Containment is analyzed to reach 370°F. Since these valves have both open and close functions supported by an air accumulator, failure of the nitrile based elastomers could prevent the valves from fulfilling their intended safety function.

A cause analysis is in-process. When completed, this LER will be supplemented.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Fort Calhoun Station	05000285	2012	- 017 -	0	2 OF 3

NARRATIVE

BACKGROUND

System Description

HCV-238 is the Reactor Coolant System (RCS) Loop 1A Charging Line Stop Valve. This valve performs an active safety function in the open and closed positions and fails open on loss of air. An air accumulator is provided to ensure that this valve can perform its closed safety function on loss of air for 25 hours. Failure of the nitrile elastomers during a design basis accident (DBA) would not affect the safety related function of this valve, but would hinder the ability to prevent excessive RCS depressurization.

HCV-239 is the RCS Loop 2A Charging Line Stop Valve. This valve performs an active safety function in both the open and closed positions and fails open on loss of air. An air accumulator is provided to ensure that this valve can perform its closed safety function on loss of air for 25 hours. Failure of the nitrile elastomers during a DBA would hinder the valve's ability to perform a safety related function.

HCV-240 is the Pressurizer, RC-4, Auxiliary Spray Inlet Valve. This valve performs an active safety function in both the open and closed positions and fails closed on loss of air. An air accumulator is provided to ensure that this valve can perform its open safety function on loss of air for 25 hours. Failure of the nitrile elastomers during a DBA would hinder the valve's ability to perform a safety related function.

EVENT DESCRIPTION

While performing an extent of condition review of Condition Report (CR) 2012-05509, which questioned the adequacy of air operated equipment inside containment to withstand containment main steam line break (MSLB) and loss of coolant accident (LOCA) temperatures, it was discovered that valves HCV-238, HCV-239, and HCV-240 have nitrile based elastomers for the air filter regulator and actuator that may not be able to withstand Containment MSLB and LOCA temperatures. The design temperature limit for the nitrile elastomers used in the valves is 180°F which is acceptable for the normal operating conditions inside Containment of 120°F. However, during MSLB and LOCA accident the temperature inside Containment is analyzed to reach 370°F. Since these valves have both open and close functions failure of the nitrile based elastomers could prevent the valves from fulfilling their intended safety function. This condition is being submitted pursuant to:

10 CFR 50.73(a)(2)(v)(D), Any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident.

CONCLUSION

A cause analysis is in-process. When completed, this LER will be supplemented.

CORRECTIVE ACTIONS

A cause analysis is in-process. When completed, this LER will be supplemented.

SAFETY SIGNIFICANCE

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Fort Calhoun Station	05000285	2012	- 017 -	0	3 OF 3

NARRATIVE

A cause analysis is in-process. When completed, this LER will be supplemented.

SAFETY SYSTEM FUNCTIONAL FAILURE

This event does result in a safety system functional failure in accordance with NEI-99-02.

PREVIOUS EVENTS

A cause analysis is in progress. Previous Events will be determined from the results of the cause analysis.