



444 South 16th Street Mall
Omaha, NE 68102-2247

LIC-13-0057
May 3, 2013

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

Reference: Docket No. 50-285

Subject: Licensee Event Report 2013-006, Revision 0, for the Fort Calhoun Station

Please find attached Licensee Event Report 2013-006, Revision 0, dated May 3, 2013. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(ii)(B), 10 CFR 50.73(a)(2)(v)(B) and (D), and 10 CFR 50.73(a)(2)(vii). 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 *Fun*
Site Vice President and CNO

LPC/epm/rjr

Attachment

- c: A. T. Howell, NRC Regional Administrator, Region IV
- J. M. Sebrosky, NRC Project Manager
- L. E. Wilkins, NRC Project Manager
- J. C. Kirkland, NRC Senior Resident Inspector

LICENSEE EVENT REPORT (LER)(See reverse 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 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.

1. FACILITY NAME

Fort Calhoun Station

2. DOCKET NUMBER

05000285

3. PAGE

1 OF 3

4. TITLE

Use of Teflon in LPSI and CS Pump Mechanical Seals

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																																				
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9. OPERATING MODE 5			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) <table border="0"><tr><td><input type="checkbox"/> 20.2201(b)</td><td><input type="checkbox"/> 20.2203(a)(3)(i)</td><td><input type="checkbox"/> 50.73(a)(2)(i)(C)</td><td><input checked="" type="checkbox"/> 50.73(a)(2)(vii)</td></tr><tr><td><input type="checkbox"/> 20.2201(d)</td><td><input type="checkbox"/> 20.2203(a)(3)(ii)</td><td><input type="checkbox"/> 50.73(a)(2)(ii)(A)</td><td><input type="checkbox"/> 50.73(a)(2)(viii)(A)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(1)</td><td><input type="checkbox"/> 20.2203(a)(4)</td><td><input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)</td><td><input type="checkbox"/> 50.73(a)(2)(viii)(B)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(i)</td><td><input type="checkbox"/> 50.36(c)(1)(i)(A)</td><td><input type="checkbox"/> 50.73(a)(2)(iii)</td><td><input type="checkbox"/> 50.73(a)(2)(ix)(A)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(ii)</td><td><input type="checkbox"/> 50.36(c)(1)(ii)(A)</td><td><input type="checkbox"/> 50.73(a)(2)(iv)(A)</td><td><input type="checkbox"/> 50.73(a)(2)(x)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(iii)</td><td><input type="checkbox"/> 50.36(c)(2)</td><td><input type="checkbox"/> 50.73(a)(2)(v)(A)</td><td><input type="checkbox"/> 73.71(a)(4)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(iv)</td><td><input type="checkbox"/> 50.46(a)(3)(ii)</td><td><input checked="" type="checkbox"/> 50.73(a)(2)(v)(B)</td><td><input type="checkbox"/> 73.71(a)(5)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(v)</td><td><input type="checkbox"/> 50.73(a)(2)(i)(A)</td><td><input type="checkbox"/> 50.73(a)(2)(v)(C)</td><td><input type="checkbox"/> OTHER</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(vi)</td><td><input type="checkbox"/> 50.73(a)(2)(i)(B)</td><td><input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)</td><td>Specify in Abstract below or in NRC Form 366A</td></tr></table>								<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input checked="" 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 checked="" 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)	<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 type="checkbox"/> 50.73(a)(2)(i)(B)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A
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10. POWER LEVEL 0																																														

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME

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	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
8	9	13

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

On March 04, 2013, at approximately 1400 CST, it was identified that the mechanical seals used in the two low pressure safety injection pumps and the three containment spray pumps are made of a material (Teflon®) that may not maintain the designed integrity of the systems under certain accident conditions. This seal design has been installed since original plant construction. This issue was discovered while the core was off-loaded by plant personnel while researching requirements for the replacement parts during scheduled outage activities.

A causal analysis is in progress. The results of the analysis will be published in a supplement to this LER.

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

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Fort Calhoun Station	05000285	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 3
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NARRATIVE

BACKGROUND

Fort Calhoun Station (FCS) is a two-loop reactor coolant system of Combustion Engineering (CE) design. The three containment spray (CS) and two low pressure safety injection (LPSI) pumps are part of the safety injection system. The CS and LPSI pumps are located outside of containment.

USAR Section 1.2.5, Engineered Safeguards Systems, contains the following information.

The CS system supplies borated water to cool and reduce the pressure of the containment atmosphere following a main steam line break. The pumps take suction from the safety injection and refueling water storage tank (SIRWT). Following a loss of coolant accident (LOCA), during the recirculation mode, the system can be aligned to the suction of the high pressure safety injection pumps (HPSI) to provide a source of subcooled water to supplement long term core cooling.

USAR Section 6.2, Safety Injection System, 6.2.1 Design Bases, states the following.

For a design basis large break LOCA, both the HPSI and LPSI pumps will operate for accident mitigation. For a main steam line break (MSLB) the HPSI, LPSI, and CS pumps will operate.

USAR Section 6.2.3.2, Low-Pressure Safety Injection Pumps, states the following.

The low-pressure safety injection pumps are used to inject large quantities of borated water into the reactor coolant system. They are also used to circulate reactor coolant during shutdown to remove residual and decay heat.

USAR Section 6.3, Containment Spray System, 6.3.1 Design Bases states the following.

The function of the containment spray system is to limit the containment pressure rise by providing a means for cooling the containment following a Main Steam Line Break (MSLB). The containment spray system may also function to augment long term core cooling for LOCA during the recirculation mode of operation.

EVENT DESCRIPTION

On March 04, 2013, at approximately 1400 CST, it was identified that the mechanical seals used in the two low pressure safety injection pumps and the three containment spray pumps are made of a material (Teflon®) that may not maintain the designed integrity of the systems under certain accident conditions. This seal design has been installed since original plant construction. This issue was discovered while the core was off-loaded by plant personnel while researching requirements for the replacement parts during scheduled outage activities.

A causal analysis is in progress. The results of the analysis will be published in a supplement to this LER.

This report is being submitted pursuant to 50.73(a)(2)(ii)(B) Any event or condition that resulted in the nuclear power plant being in an unanalyzed condition that significantly degraded plant safety, 10 CFR 50.73(a)(2)(v) Any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to (B) Remove residual heat, and (D) Mitigate the consequences of an accident, and 10 CFR 50.73(a)(2)(vii) Any event where a single cause or condition caused at least one independent train or channel to become inoperable in multiple systems or two independent trains or channels to become inoperable in a single system designed to (B)

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NARRATIVE

Remove residual heat and (D) Mitigate the consequences of an accident.” This condition was initially reported on March 4, 2013 under 10 CFR 50.72(b)(3)(ii)(B), Unanalyzed Condition (ENS No. 48806).

CONCLUSION

A causal analysis is in progress. The results of the analysis will be published in a supplement to this LER.

CORRECTIVE ACTIONS

A causal analysis is in progress. The results of the analysis will be published in a supplement to this LER

SAFETY SIGNIFICANCE

A causal analysis is in progress. The results of the analysis will be published in a supplement to this LER.

SAFETY SYSTEM FUNCTIONAL FAILURE

A causal analysis is in progress. The results of the analysis will be published in a supplement to this LER.

PREVIOUS EVENTS

A causal analysis is in progress. The results of the analysis will be published in a supplement to this LER.