



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

LIC-13-0180
January 6, 2014

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

Reference: Docket No. 50-285

Subject: Licensee Event Report 2013-016, Revision 0, for the Fort Calhoun Station

Please find attached Licensee Event Report 2013-016, Revision 0. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(ii)(B), 10 CFR 50.73(a)(2)(v), 10 CFR 50.73(a)(2)(i)(B), 10 CFR 50.73(a)(2)(vii), and 10 CFR 50.73(a)(2)(ix)(A). 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
J. M. Sebrosky, NRC Senior Project Manager
J. C. Kirkland, NRC Senior Resident Inspector
L. E. Wilkins, NRC Project Manager

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
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4. TITLE
Reporting of Additional High Energy Line Break Concerns

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
11	05	2013	2013	016 - 0		01	06	2014	FACILITY NAME	DOCKET NUMBER
										05000
										05000

9. OPERATING MODE 5	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: <i>(Check all that apply)</i>									
	<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 checked="" 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 checked="" 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 checked="" type="checkbox"/> 50.73(a)(2)(v)(D)							

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME Erick Matzke	TELEPHONE NUMBER <i>(Include Area Code)</i> 402-533-6855
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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 <input type="checkbox"/> YES <i>(If yes, complete 15. EXPECTED SUBMISSION DATE)</i> <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

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

On October 18, 2013, as part of an extent of condition for LERs 2012-017 and 2013-011, Fort Calhoun Station (FCS) personnel identified a potential additional high energy line break (HELB) concern with the piping associated with the letdown heat exchanger (LDHX). Subsequently on November 5, 11, 16, and 20, additional HELB impacts were also identified. These impacts involved increased loads on supports in the piping subsystem MS-4099 (main steam supply to FW-10), high energy line cracking (HELK) related to auxiliary steam in various rooms in the power block, the assumptions made regarding diesel generator operability during a HELB, and the quality of the steam to FW-10, the steam-driven auxiliary feedwater pump.

It was previously determined and reported that FCS did not fully implement and/or maintain the Electrical Equipment Qualification (EEQ) program to meet the requirements of 10 CFR 50.49. As a consequence, the equipment included in the EEQ program, the systems included in the High Energy Line Break (HELK) Analysis and the environmental conditions used by the EEQ program have not been maintained current or in an auditable manner. In addition to the corrective actions (CA) to resolve the EEQ/HELK program issues previously reported, additional CAs are being pursued to address the individual conditions listed above.

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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.

EVENT DESCRIPTION

On October 18, 2013, as part of an extent of condition for LERs 2012-017 and 2013-011, Fort Calhoun Station (FCS) personnel identified a potential additional high energy line break (HELB) concern with the piping associated with the letdown heat exchanger (LDHX). Subsequently on November 5, 11, 16, and 20, additional impacts were also identified. These impacts involved increased loads on supports in the piping subsystem MS-4099 (main steam supply to FW-10, the steam-driven auxiliary feedwater pump), high energy ling cracking (HELC) related to auxiliary steam in various rooms in the power block, the assumptions made regarding diesel generator operability during a HELB, and the quality of the steam to FW-10.

At approximately 1938 Eastern Daylight Time (EST) on October 18, 2013, an 8-hour notification was made to the Headquarters Operations Office, under 10 CFR 50.72(b)(3)(ii)(A), Degraded Condition, reporting the initial HELB impact from the LDHX piping.

These events are being submitted as a separate LER due to being discovered in excess of 60 days from LER 2013-011. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(ii) any event or condition that resulted in: (B) 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; (C) control the release of radioactive material; and (D) mitigate the consequences of an accident, 10 CFR 50.73(a)(2)(i)(B) any operation or condition which was prohibited by the plant's Technical Specifications, 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) remove residual heat; (C) control the release of radioactive material; and (D) mitigate the consequences of an accident, and 10 CFR 50.73(a)(2)(ix)(A) any event or condition that as a result of a single cause could have prevented the fulfillment of a safety function for two or more trains or channels in different systems that are needed to: (2) remove residual heat; (3) control the release of radioactive material; and (4) mitigate the consequences of an accident.

CONCLUSION

It was previously determined and reported in OPPD LERs 2012-017 and 2013-011 that FCS did not fully implement and/or maintain the electrical equipment qualification (EEQ) program to meet the requirements of 10 CFR 50.49. As a consequence, the equipment included in the EEQ program, the systems included in the HELB analysis and the environmental conditions used by the EEQ program have not been maintained current or in an auditable manner.

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NARRATIVE

CORRECTIVE ACTIONS

In addition to the corrective actions (CA) to resolve the EEQ/HELB program issues previously reported, additional CAs are being pursued to address the individual conditions.

- A pipe whip restraint, CHVS-253, has been added to piping system CH-4106 to eliminate the letdown heat exchanger line break concern. (Engineering Change 62388, CH-7 Letdown Heat Exchanger Inlet Pipe Whip Restraint).
- Ten existing pipe supports were modified and three additional supports were added to piping subsystem MS-4099 to address pipe loading concerns. (Engineering Change 53202, Modify Piping and Supports for FW-10 MS Supply for HELB Concerns).
- Auxiliary steam has been isolated to Rooms 63, 64, 65, 69, and the intake structure to eliminate the effects of high energy line cracks associated with the auxiliary steam piping in these locations. This includes the diesel generator operability concerns during a HELB.
- Two flood barriers were installed in Room 81 to protect the steam supply to FW-10 from being quenched by possible flooding. (Engineering Change 62391, FW-10 Steam Supply Line A and B HELB Flood Barriers).

SAFETY SIGNIFICANCE

The conditions identified had the potential to impact both of the emergency diesel generators, the raw water pumps, containment outboard isolation for penetrations M-75 through M-88, component cooling water, and the steam-driven auxiliary feedwater pump FW-10.

SAFETY SYSTEM FUNCTIONAL FAILURE

This does not represent a new safety system functional failure in accordance with NEI 99-02, Revision 7, as it has previously been reported in LERs 2012-017 and 2013-011.

PREVIOUS EVENTS

LER	Subject
2012-002	Inadequate Qualifications for Containment Penetrations Renders Containment Inoperable
2012-009	Inoperable Equipment due to Lack of Environmental Qualifications
2012-015	Electrical Equipment Impacted by High Energy Line Break Outside Containment
2013-011	Inadequate Design for High Energy Line Break in Rooms 13 and 19 of Auxiliary Building

The condition discussed in this LER was identified during the extent of condition from the investigation in response to the HELB/EQ programic issues. The conditions identified are considered latent conditions that would not have been corrected by previous actions taken to prevent recurrence.