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

10 CFR 50.73

LIC-15-0026
February March 27, 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

Subject: Licensee Event Report 2015-001, Revision 0, for the Fort Calhoun Station

Please find attached Licensee Event Report 2015-001, Revision 0. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(ii)(B), unanalyzed condition. 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

NRC FORM 366 (02-2014) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 01/31/2017

LICENSEE EVENT REPORT (LER)

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

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

Inadequate Design of High Energy Line Break Barriers

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
09	30	2013	2015	001 -	00	03	27	2015	FACILITY NAME	DOCKET NUMBER 05000

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

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	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	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO				

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

On January 28, 2015, following a station initiated review of operability evaluations, it was determined that a penetration with inadequate jet impingement protection had been previously identified as part of station extent of condition reviews and constituted an unanalyzed condition, but, had not been reported as required. This issue was discovered during an extent of condition review of high energy line break issues that the station initiated due to previously identified concerns. This issue and the other issues identified during the extent of condition review were corrected prior to plant heatup.

The Shift Manager that approved the operability evaluation believed that the reportability aspect of the penetration had been previously reported to the NRC and that no further report was required. The Shift Manager did not confirm that the reportability had been completed under another LER.

These issues were discovered during the Electrical Environmental Qualification Program Reconstitution Project. The deficiencies were discovered during extent of condition reviews. The deficiencies were properly remediated prior to plant startup in December 2013.

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NARRATIVE

BACKGROUND

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

EVENT DESCRIPTION

On January 28, 2015, following a station initiated review of operability evaluations, it was determined that inadequate jet impingement protection for a penetration with an inadequate seal had been previously identified as part of station extent of condition reviews. This constituted an unanalyzed condition that had not been previously reported as required. The condition was initially identified on September 30, 2013. The station was shutdown and cooled down in mode 5 (refueling shutdown) at the initial time of discovery. The degraded condition was discovered during an extent of condition review of high energy line break (HELB) issues at the station initiated due to previously identified concerns. This issue and the other issues identified during the extent of condition review were corrected prior to plant heatup.

This report is being submitted pursuant to 10 CFR 50.73(a)(2)(ii)(B), Unanalyzed Condition.

CONCLUSION

The station has reported several issues to the NRC concerning HELB issues identified at the station. These LERs include, 2012-009 (Inoperable Equipment due to Lack of Environmental Qualifications), 2012-015 (Electrical Equipment Impacted by High Energy Line Break Outside of Containment), 2012-017 (Containment Valve Actuators Design Temperature Ratings Below Those Required for Design Basis Accidents), 2013-011 (Inadequate Design for High Energy Line Break in Rooms 13 and 19 of the Auxiliary Building), 2013-015 (Unqualified Coating Used as a Water Tight Barrier in Rooms 81 and 82), 2013-016 (Reporting of Additional High Energy Line Break Concerns) and 2014-004 (Unqualified Limit Switches Render Safety Equipment Inoperable).

The Shift Manager that approved the Operability Evaluation believed that the reportability aspect of the penetration had been previously reported to the NRC and that no further report was required. The Shift Manager did not confirm that the reportability had been completed under another LER.

Portions of the HELB barrier between room 81 (steam and feed line room) and room 56 (switchgear room) were found degraded. Specifically, several areas under the main steam and feedwater lines in room 81 lacked adequate protection from jet impingement. These areas included penetration 557 and several small areas of the floor in room 81. The floor slab in room 81 is the ceiling of room 56.

CORRECTIVE ACTIONS

The degraded jet impingement barriers were discovered as part of the extent of condition reviews for the Electrical Environmental Qualification (EEQ) Program Reconstitution Project. The deficiencies were properly remediated prior to plant startup in December 2013. All other HELB issues found as part of the extent of condition reviews were reviewed and no other cases of failing to report events were identified.

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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NARRATIVE

SAFETY SIGNIFICANCE

Jet impingement protection did not meet the requirements for proper HELB mitigation. As a result, some equipment may have been impacted during potential high energy line breaks in room 81. Room 81 contains the main steam lines and the main feedwater lines. The barrier may not have performed its function for those HELBs that resulted in jet impingement directly on the degraded portion of the barrier. Under these conditions, a postulated HELB had the potential to impact the ability of safety systems to respond to the accident.

SAFETY SYSTEM FUNCTIONAL FAILURE

This does not represent a safety system functional failure in accordance with NEI 99-02, revision 7.

PREVIOUS EVENTS

2012-009 (Inoperable Equipment due to Lack of Environmental Qualifications), 2012-015 (Electrical Equipment Impacted by High Energy Line Break Outside of Containment), 2012-017 (Containment Valve Actuators Design Temperature Ratings Below Those Required for Design Basis Accidents), 2013-011 (Inadequate Design for High Energy Line Break in Rooms 13 and 19 of the Auxiliary Building), 2013-015 (Unqualified Coating Used as a Water Tight Barrier in Rooms 81 and 82), 2013-016 (Reporting of Additional High Energy Line Break Concerns) and 2014-004 (Unqualified Limit Switches Render Safety Equipment Inoperable)