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

LIC-13-0089
June 28, 2013

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

Reference: Docket No. 50-285

Subject: Licensee Event Report 2013-002, Revision 1, for the Fort Calhoun Station

Please find attached Licensee Event Report 2013-002, Revision 1. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(v)(C). 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/rjr/epm

Attachment

c: A. T. Howell, NRC Regional Administrator, Region IV
J. M. Sebrosky, NRC Sr. Project Manager
L. E. Wilkins, NRC Project Manager
J. C. Kirkland, NRC Sr. 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 205 55-0001, 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)

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Fort Calhoun Station	05000285	1 OF 3

4. TITLE

CVCS Class 1 & 2 Charging Supports are Unanalyzed

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
1	25	2013	2013	002 -	1	06	28	2013	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

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

On January 25, 2013, while developing the modification to replace a portion of the Chemical and Volume Control System (CVCS) piping in containment, it was identified that the original piping supports had no calculations of record. When the calculations for the replacement piping were completed using the original support configuration, an overstress condition of the new piping was identified that directly related to the old piping. This condition would have made the original piping susceptible to failure during a seismic event. Portions of the Class 1 charging and letdown lines were affected. The plant was shutdown and defueled at the time of discovery.

The causal analysis determined that station construction project management failed to ensure that initial construction procedures for design and installation of small bore piping systems and supports were in compliance with USA Standard B31.7, Nuclear Power Piping.

Fort Calhoun Station will analyze and modify the supports as required to conform to the piping load requirements of the various operational Modes prior to entering that Mode.

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NARRATIVE

BACKGROUND

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

The FCS Chemical and Volume Control System (CVCS) consists in part of three charging pumps that take suction from the volume control tank and return the coolant to the reactor coolant system by way of the shell side of the regenerative heat exchanger. The heat exchanger transfers heat from the letdown coolant to the charging coolant before the charging coolant is returned to the reactor coolant system. Although the three charging pumps start upon receipt of an Engineered Safeguards signal, no credit is taken for charging pump operation in the Updated Safety Analysis Report (USAR) safety analyses and as such these pumps are not classified as engineered safeguards equipment. CVCS is classified as a reactor coolant exposed system. The CVCS charging line enters containment through penetration M-3. The valve configuration on this penetration is acceptable because the pressure in the direction of flow toward containment is greater than the maximum containment pressure.

EVENT DESCRIPTION

On January 25, 2013, while developing the modification to replace a portion of the Chemical and Volume Control System (CVCS) piping in containment, it was identified that the original piping supports had no calculations of record. When the calculations for the replacement piping were completed using the original support configuration, an overstress condition of the new piping was identified that directly related to the old piping. This condition would have made the original piping susceptible to failure during a seismic event. Portions of the Class 1 charging and letdown lines were affected. CVCS is classified as a reactor coolant exposed system and charging line replaced is credited for maintaining pressure at containment penetration M-3, where CVCS enters containment, above containment pressure for a minimum of 30 minutes after a loss of coolant accident. The letdown line replaced contains TCV-202 which closes on a containment isolation actuation signal. The plant was shutdown and defueled at the time of discovery.

This report is being submitted in accordance with 10 CFR 50.73(a)(2)(i)(B), any operation or condition which was prohibited by the plant's Technical Specifications and 10 CFR 50.73(a)(2)(v)(C), any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material.

CONCLUSION

The causal analysis determined that station construction project management failed to ensure that initial construction procedures for design and installation of small bore piping systems and supports were in compliance with USA Standard B31.7, Nuclear Power Piping. The RCA team determined that the procedure for installing small bore piping and supports used a generic methodology consisting of a seismic spacing nomograph and qualitative walkdowns to address thermal expansion concerns.

CORRECTIVE ACTIONS

Fort Calhoun Station will:

1. Analyze and modify the supports as required to conform to the piping load requirements of the various operational Modes prior to entering that Mode, and

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NARRATIVE

2. Revise and implement procedures to specify the detailed piping stress analyses and support qualification to be performed to demonstrate full code compliance for small bore piping systems and supports designed to USAS B31.7.

SAFETY SIGNIFICANCE

A CVCS piping failure event is enveloped by the small break LOCA as described in FCS USAR Section 14.5.5. This type of event at power operations would cause automatic or manual shutdown of the plant per design and operating procedures. Operations would then control RCS volume per applicable emergency procedures.

SAFETY SYSTEM FUNCTIONAL FAILURE

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

PREVIOUS EVENTS

Seventeen LERs with event dates between January 1, 2010, and January 25, 2013, were identified with the same reporting criteria. However, the condition identified in this LER is a latent condition that could not have been prevented by the corrective actions taken as a result of the LERs reviewed.