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

LIC-13-0051
April 29, 2013

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

Reference: Docket No. 50-285

Subject: Licensee Event Report 2013-005, Revision 0, for the Fort Calhoun Station

Please find attached Licensee Event Report 2013-005, Revision 0, dated April 29, 2013. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(v)(D) and 10 CFR 50.73(a)(2)(vii)(D). 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/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

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)

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4. TITLE

Control Room HVAC Modification Not Properly Evaluated

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
2	27	2013	2013	005 -	0	04	29	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)	☐ 20.2203(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)
☐ 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)
☐ 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

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
7	31	13

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

On February 27, 2013, while reviewing a response to an NRC question, an issue was identified where the modification which moved the control room air conditioners condensers from inside the control room to the auxiliary building roof should have obtained prior NRC approval. The condensers are located in close proximity to one another and are protected by a grating that is not rated to withstand a tornado missile. Therefore, it is possible that both the A and B trains could be struck and rendered inoperable by the same missile. The review determined that prior NRC approval had not been obtained for the modification and the condition was entered in to the station's corrective action program. At the time of discovery, the unit was shutdown with fuel removed.

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

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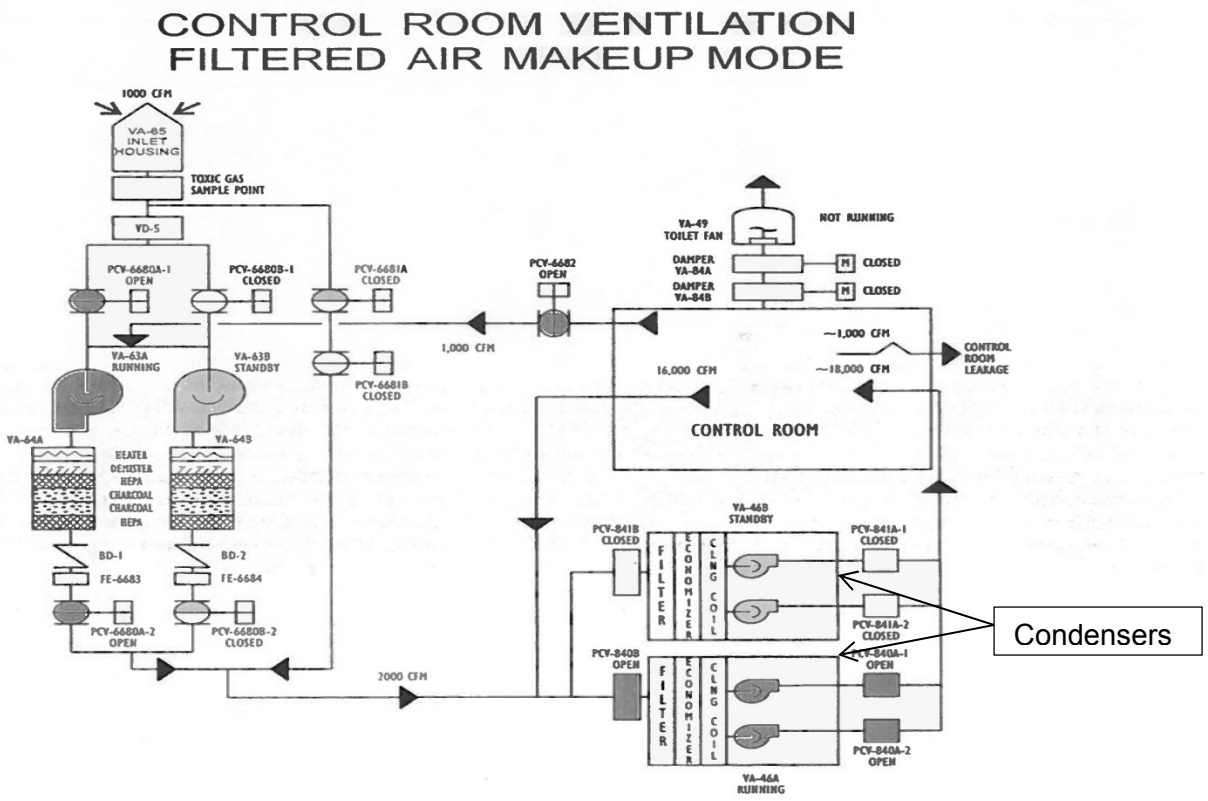
NARRATIVE

BACKGROUND

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

Below is a simplified diagram of the control room ventilation.



Filtered air mode for CR HVAC consists of:
Filtered Air Makeup Fan (VA-63A or VA-63B) takes a suction on the Control Room via PCV-6682 and outside through VA-65 via PCV-6680A(B)-1.

These two paths provide 1000 cfm of filtered air and 1000 cfm of air drawn from the Control Room which combines at the suction of VA-63A(B).

This 2000 cfm passes through filter unit VA-64A(B) to the suction of VA-46A(B) which is circulating 18,000 cfm.

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NARRATIVE

Applicable Technical Specifications:

2.8.2 Refueling Operations – Containment
2.8.2(4) Control Room Ventilation System (CRVS)

Applicability
Applies to operation of the CRVS during CORE ALTERATIONS and REFUELING OPERATIONS inside containment.

Specification
The CRVS shall be IN OPERATION and in the Filtered Air mode.

2.8.3 Refueling Operations - Spent Fuel Pool
2.8.3(5) Control Room Ventilation System (CRVS)

Applicability
Applies to operation of the CRVS during REFUELING OPERATIONS in the spent fuel pool area. The provisions of Specification 2.0.1 for Limiting Conditions for Operation are not applicable.

Objective
To minimize the consequences of a fuel handling accident to the control room staff.

Specification
(1) The CRVS shall be IN OPERATION and in the Filtered Air mode.
(2) A spent fuel pool area radiation monitor shall be IN OPERATION.

2.12 Control Room Ventilation System
2.12.1 Control Room Air Filtration System - Operating

Applicability
Applies to the operational status of the control room air filtration system when the reactor coolant temperature Tcold >210°F.

Objective
To assure operability of equipment required to filter control room air following a Design Basis Accident.

Specification
Two control room air filtration trains shall be OPERABLE.

2.12 Control Room Ventilation System
2.12.2 Control Room Air Conditioning System

Applicability
Applies to the operational status of the control room air conditioning system when the reactor coolant temperature Tcold >210°F.

Objective
To assure operability of equipment required to maintain air temperature within the control room following a Design Basis Accident.

Specification
Two control room air conditioning trains shall be OPERABLE.

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NARRATIVE

Fort Calhoun Station was licensed prior to the General Design Criteria and Standard Review Plan. The station was designed in accordance with the 70 draft General Design Criteria published for comment in the Federal Register (32 FR 10213) on July 11, 1967. Criterion 2 of the 70 draft General Design Criteria, which discusses tornadoes and appears in the Updated Safety Analysis Report (USAR), is provided below.

CRITERION 2 - PERFORMANCE STANDARDS

> Those systems and components of reactor facilities which are essential to the prevention of accidents which could affect public health and safety or to mitigation of their consequences shall be designed, fabricated, and erected to performance standards that will enable the facility to withstand, without loss of the capability to protect the public, the additional forces that might be imposed by natural phenomena such as earthquakes, tornadoes, flooding conditions, winds, ice and other local site effects. The design bases so established shall reflect: (a) Appropriate consideration for the most severe of these natural phenomena that have been recorded for the site and the surrounding area and (b) an appropriate margin for withstanding forces greater than those recorded to reflect uncertainties about the historical data and their suitability as a basis for design.

USAR Section 9.10.2.4, Revision 22, Control Room Air Conditioning System, contains the following system discussion.

> The control room air conditioning system consists of two, air cooled split system package air conditioning units, each rated at 100 percent of the system design capacity, and supply and return ductwork. The system is designed for normal operation at 18,000 cubic feet per minute total air volume with 1000 CFM of outside ventilating air makeup. The air cooled condensers for each Freon refrigeration unit is located on the auxiliary building roof above Room 69. The air condenser units are protected from tornado winds [360 mph] with a windscreen. Standard Review Plan (SRP) Section 2.2.3 was used to design the air cooled condensers windscreen. The SRP criteria was met, therefore, no tornado missile shielding for the air cooled condensers is required.
>
> The control room HVAC is an essential auxiliary support system and hence, is part of the plant's engineered safeguards, as defined in Section 6.

EVENT DESCRIPTION

On February 27, 2013, while reviewing a response to an NRC 0350 question, an issue was identified where the modification which moved the control room air conditioners condensers from inside the control room to the auxiliary building roof should have obtained prior NRC approval. The condensers are located in close proximity to one another and are protected by a grating that is not rated to withstand a tornado missile. Therefore, it is possible that both the A and B trains could be struck and rendered inoperable by the same missile. The review determined that prior NRC approval had not been obtained for the modification and the condition was entered in to the station's corrective action program (CR 2013-04266). At the time of discovery, the unit was shutdown with fuel removed.

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

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NARRATIVE

This report 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, and 10 CFR 5073(a)(2)(vii)(D): Any event where a single cause or condition caused two independent trains or channels to become inoperable in a single system designed to mitigate the consequences of an accident.

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.