



LIC-13-0111  
August 16, 2013

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

Reference: 1. Docket No. 50-285  
2. Letter from OPPD (L. P. Cortopassi) to NRC (Document Control Desk),  
dated June 4, 2013 (LIC 13-0072)

**Subject: Licensee Event Report 2013-007, Revision 1, for the Fort Calhoun  
Station**

Please find attached Licensee Event Report 2013-007, Revision 1. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B). 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,

A handwritten signature in black ink, appearing to read "LPC", is written over a large, stylized "OPPD" logo.

Louis P. Cortopassi  
Site Vice President and CNO

LPC/epm

Attachment

c: S. A. Reynolds, Acting 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.

<b>1. FACILITY NAME</b> Fort Calhoun Station	<b>2. DOCKET NUMBER</b> 05000285	<b>3. PAGE</b> 1 OF 3
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**4. TITLE**  
Containment Air Cooling Units (VA-16A/B) Seismic Criteria

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
4	06	2013	2013	007 - 1		08	16	2013	FACILITY NAME	DOCKET NUMBER
										05000
										05000

<b>9. OPERATING MODE</b>  5	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:</b> <i>(Check all that apply)</i>									
<b>10. POWER LEVEL</b>  0	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input 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 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 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 checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A							

**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	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input type="checkbox"/> YES <i>(If yes, complete 15. EXPECTED SUBMISSION DATE)</i> <input checked="" type="checkbox"/> NO	<b>15. EXPECTED SUBMISSION DATE</b>	MONTH	DAY	YEAR

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

Condition Report (CR) 2013-02260 identified that a summary structural analysis (FC03901) indicated that VA-15A/B (Containment Air Cooler/Filter) plenum was overstressed by 100 percent and that VA-16A/B (Containment Air Cooler) plenum would have been overstressed during a design basis seismic event. At the time of discovery, FC03901 indicated that VA-15A/B required cross-bracing, which was added resulting in the equipment being operable. Since VA-16A/B was overstressed, they were considered inoperable.

The causal analysis determined that the design basis information was incomplete at the beginning of commercial operation. A weakness in licensing basis knowledge and a failure to internalize the importance of the design basis, resulted in the organization missing repeated opportunities to correct the initial deficiencies and additional errors were created over time. Also, the early culture established standards and expectations for the organization that resulted in behaviors demonstrating that the operation of the facility was more important than maintaining the license and design basis of the Station. This resulted in long-standing, reinforced, and institutionalized behaviors that resisted external and internal efforts to change.

The VA-16A/B plenums will be restored to an operable condition. Additional corrective actions will be tracked by the corrective action process.

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

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE		
Fort Calhoun Station	05000285	YEAR	SEQUENTIAL NUMBER	REV NO.	2	OF	3
		2013	- 007	- 1			

**NARRATIVE**

**BACKGROUND**

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

**EVENT DESCRIPTION**

Condition Report (CR) 2013-02260 identified that a summary structural analysis (FC03901) indicated that VA-15A/B (Containment Air Cooler/Filter) plenum was overstressed by 100 percent and that VA-16A/B (Containment Air Cooler) plenum would have been overstressed during a design basis seismic event. At the time of discovery, FC03901 indicated that VA-15A/B required cross-bracing, which had been added during initial plant construction resulting in the equipment being operable. Since VA-16A/B was overstressed, they were considered inoperable.

During an inspection, the NRC questioned the operability determination provided in CR 2013-02260 for VA-15A/B and VA-16A/B due to the seismic criteria not being met. The station responded that since the cross-bracing had been added to VA-15A/B during initial plant construction, they were considered operable. However, VA-16A/B did not meet the current licensing basis and were considered inoperable. On April 6, 2013, CR 2013-07674 was initiated and a reportability evaluation determined that the condition was reportable. The unit was defueled when the condition was identified.

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.

**CONCLUSION**

During Manual Chapter 0350 inspection activities, the NRC found and questioned an original plant design calculation from 1973 which indicated that containment ventilation cooling unit VA-15A&B and VA-16A&B plenums have stress points beyond yield. CR 2013-05570 "FCS Design and License Basis Configuration Control," documents broader issues with design and licensing basis configuration control. A Root Cause Analysis for CR 2013-05570 was performed and two root causes were identified that apply:

Root Cause 1 – OPPD Design basis information was incomplete at the beginning of commercial operation. This initial condition, combined with a weakness in licensing basis knowledge and a failure to internalize the importance of the design basis, resulted in the organization missing repeated opportunities to correct the initial deficiencies and additional errors were created over time.

Root Cause 2 – The early culture established standards and expectations for the organization that resulted in behaviors demonstrating that the operation of the facility was more important than maintaining the license and design basis of the Station. This early culture established long-standing, reinforced, and institutionalized behaviors that have resisted external and internal efforts to change.

**CORRECTIVE ACTIONS**

The station will verify that the VA-16A/B plenums are restored to an operable condition.

The causes associated with the plenum structural analysis will be addressed by the corrective actions in CR 2013-05570 "FCS Design and License Basis Configuration Control."

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

**SAFETY SIGNIFICANCE**

The containment cooling system consists of two smaller cooling units (VA-16 A/B) and two large cooling and filtering units (VA-15 A/B). All four of the units are cooled by the component cooling water system which is in turn cooled by the raw water system (from the ultimate heat sink). These units are designed to cool the containment during both normal and accident conditions. The operation of any of the units following a seismic event will maintain adequate cooling for the containment building. The potential deformation of the cooler housing is unlikely to have a significant impact on the integrity of the component cooling water system.

**SAFETY SYSTEM FUNCTIONAL FAILURE**

This issue does not constitute a safety system functional failure in accordance with NEI 99-02, Revision 6.

**PREVIOUS EVENTS**

LERs 2013-001, 2012-020, 2012-014 and 2012-010 document issues with seismic qualification.