



444 South 16th Street Mall  
Omaha NE 68102-2247

LIC-09-0001  
January 12, 2009

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

Reference: Docket No. 50-285

**Subject: Licensee Event Report 2008-003 Revision 0 for the Fort Calhoun Station**

Please find attached Licensee Event Report 2008-003, Revision 0, dated January 12, 2009. This report is being submitted pursuant to 10CFR50.73(a)(2)(i)(b) and 10CFR50.73(a)(2)(v)(B). No commitments are made to the NRC in this letter.

If you should have any questions, please contact me.

Sincerely,

Jeffrey A. Reinhart  
Site Vice President  
Fort Calhoun Station

JAR/epm

Attachment

- c: E. E. Collins, NRC Regional Administrator, Region IV
- Alan Wang, NRC Project Manager
- J. D. Hanna, NRC Senior Resident Inspector
- INPO Records Center

JEAD  
NRC

# 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 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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 4

4. TITLE

Operation With Inoperable EDG and Opposite Train Feature Prohibited by TS

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTI AL NUMBER	REV NO	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	21	2008	2008	- 003 -	00	01	12	2009	FACILITY NAME	05000
									FACILITY NAME	05000

9. OPERATING MODE

3

10. POWER LEVEL

0

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)

- |   |   |   |  |
|---|---|---|--|
| <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 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 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<br>or in NRC Form 366A |

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME

Erick Matzke

TELEPHONE NUMBER (include Area Code)

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
03	16	2009

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

On November 11, 2008, Fort Calhoun Station personnel confirmed that on March 21, 2008, the plant was in a configuration where an appropriate Technical Specification (TS) was not entered. At that time, entry into TS 2.5(1)D Limiting Conditions for Operation (LCO) was not made for the inoperability of two Auxiliary Feedwater (AFW) pumps or two inoperable AFW trains. Early on March 21, 2008, turbine driven AFW pump (FW-10) was declared inoperable. Entry was made into TS 2.5(1)B, a 24-hour LCO. At 1427, Diesel Generator (DG) 1 was taken out of service and declared inoperable for the performance of a surveillance test. Entry was made into TS 2.7(2)j for a single DG inoperable, a 7-day LCO. At 1445, DG-1 was subsequently declared operable. With FW-10 inoperable and the emergency power source for the motor driven AFW pump (FW-6) inoperable, FW-6 was also inoperable for the 18 minutes that DG-1 was inoperable.

The root cause of this event is still being investigated. A supplement to this LER will be submitted when the cause determination is complete.

Following discovery of this event, interim guidance was provided to operations on application of TS. Additional actions will be administered by the corrective action system.

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

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Fort Calhoun Station	05000285	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 4
		2008 -	003 -	00	

**NARRATIVE**

**BACKGROUND**

Fort Calhoun Station (FCS) Technical Specification (TS) 2.0.1(2) states:

“When a system, subsystem, train, component, or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s), and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in at least HOT SHUTDOWN within 6 hours, in at least subcritical and <300°F within the next 6 hours, and in at least COLD SHUTDOWN within the following 30 hours. This specification is not applicable in Operating Modes 4 or 5.”

The Basis for this Specification states:

“This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the system specific specifications for power sources, when a normal or emergency power source is not OPERABLE. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component, or device in another division is inoperable for another reason.

The provisions of this specification permit the requirements associated with individual systems, subsystems, trains, components, or devices to be consistent with the specification of the associated electrical power source. It allows operation to be governed by the time limits of the requirements associated with the Limiting Condition for Operation for the normal or emergency power source, not the individual requirements for each system, subsystem, train, component, or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.”

FCS TS 2.5(1) states:

“Two AFW trains shall be OPERABLE when Tcold is above 300°F.

- A. With one steam supply to the turbine driven AFW pump inoperable, restore the steam supply to OPERABLE status within 7 days and within 8 days from discovery of failure to meet the LCO.
- B. With one AFW train inoperable for reasons other than condition A, restore the AFW train to OPERABLE status within 24 hours.
- C. If the required action and associated completion times of condition A or B are not met, then the unit shall be placed in MODE 2 in 6 hours, in MODE 3 in the next 6 hours, and less than 300°F without reliance on the steam generators for decay heat removal within the next 18 hours.
- D. With both AFW trains inoperable, then initiate actions to restore one AFW train to OPERABLE status immediately. Technical Specification (TS) 2.0.1 and all TS actions requiring MODE changes are suspended until one AFW train is restored to OPERABLE status.”

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**NARRATIVE**

The Auxiliary Feedwater (AFW) system is provided for storage, pumping and delivery of makeup water to the steam generators in order to remove decay heat if the Main Feedwater (MFW) system is not available. The AFW system consists of one emergency feedwater storage tank; one motor-driven (FW-6) and one turbine-driven (FW-10) AFW pump; one non-safety-related, diesel-driven AFW pump (FW-54); one non-safety-related diesel fuel oil transfer pump and day tank; non-safety-related fuel oil piping and valves; remotely operated flow control valves; interconnecting piping to the MFW system and piping to the auxiliary feedwater nozzles in the steam generators. FW-6 and FW-10 are the safety related AFW pumps. The AFW system provides a redundant means of supplying one or both Steam Generators (SGs) with feedwater. The emergency power source for FW-6 is Diesel Generator (DG) 1.

FW-54 is the startup auxiliary feedwater pump. FW-54 takes suction from the condensate storage tank and discharges to the normal feedwater header. FW-54 and its associated equipment are not safety related.

**EVENT DESCRIPTION**

On March 21, 2008, FCS was operating in TS Mode 3, subcritical, at a nominal 530 degrees Fahrenheit.

On March 21, 2008, at 0102 Central Standard Time (CST), turbine driven AFW pump FW-10, was taken out of service and declared inoperable for maintenance. Entry was made into TS 2.5(1)B.

At 1427 on March 21, DG-1 was taken out of service and declared inoperable for the performance of a surveillance test. Entry was made into TS 2.7(2)j, a 7-day LCO. At 1445, DG-1 was subsequently declared OPERABLE. At 1723, FW-10 was declared OPERABLE.

With FW-10 inoperable and the emergency power source for the FW-6 inoperable, FW-6 was also inoperable for the 18 minutes that DG-1 was inoperable.

Entry into TS 2.5(1)D Limiting Conditions for Operation (LCOs) was not made when both AFW trains were made inoperable.

The issue was confirmed on November 11, 2008, after reviewing appropriate documentation. This report is being submitted pursuant to 10CFR50.73(a)(2)(i)(b) and 10CFR50.73(a)(2)(v)(B).

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**NARRATIVE**

**CONCLUSION**

The root cause of this event is still being investigated. A supplement to this LER will be submitted when the cause determination is complete.

**CORRECTIVE ACTIONS**

Following discovery of this event, interim guidance was provided to operations on application of TS. Additional actions will be administered by the corrective action system.

**SAFETY SIGNIFICANCE**

For a short period of time, both of the emergency feedwater pumps were inoperable. One of the pumps (FW-10) was undergoing maintenance. The other pump (FW-6) should have been declared inoperable because its emergency power source (DG-1) was inoperable. The normal source of power to FW-6 was available throughout this event. Feeding the SGs was needed for decay heat removal. At the time of this event, the reactor had been shutdown for a week. In this case, decay heat was about 0.3 percent of full reactor power. During the time of the event, non safety related diesel driven auxiliary feedwater pump (FW-54) was feeding the SG. Should FW-54 have been lost, at least an hour would have been available before feedwater would be required to remove decay heat. The MFW system was available to feed the SGs during the time emergency feedwater was inoperable. Once-through-cooling with the high pressure safety injection system (HPSI) also could have been used if needed. During the time in question, the SG levels were in the normal operating range. Thus, a large volume of water was available to remove decay heat. The short duration of the event and the other available methods of decay heat removal result in this event having no significant impact on the health and safety of the public.

**SAFETY SYSTEM FUNCTIONAL FAILURE**

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

**PREVIOUS SIMILAR EVENTS**

LER 1996-006 documents a similar occurrence.