



Fort Calhoun Station
9610 Power Lane
Blair, NE 68008

LIC-10-0026
April 23, 2010

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

Reference: Docket No. 50-285

Subject: Licensee Event Report 2009-004 Revision 1 for the Fort Calhoun Station

Please find attached Licensee Event Report 2009-004, Revision 1, dated April 23, 2010. This report is being submitted pursuant to 10CFR50.73(a)(2)(i)(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/rda

Attachment

- c: E. E. Collins, NRC Regional Administrator, Region IV
L. E. Wilkins, NRC Senior Project Manager
J. C. Kirkland, NRC Senior Resident Inspector
INPO Records Center

JE22
NRR

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 3

4. TITLE

Containment Integrity Unknowingly Violated During Performance of a Leak Test

5. EVENT DATE

MONTH	DAY	YEAR
11	26	2006

6. LER NUMBER

YEAR	SEQUENTI AL NUMBER	REV NO
2009	- 004 -	01

7. REPORT DATE

MONT H	DAY	YEAR
04	23	2010

8. OTHER FACILITIES INVOLVED

FACILITY NAME	DOCKET NUMBER
	05000
FACILITY NAME	05000

9. OPERATING MODE

3

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 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

Richard Acker

TELEPHONE NUMBER (include Area Code)

402-533-6561

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

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO15. EXPECTED
SUBMISSION
DATE

MONTH	DAY	YEAR

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

Containment integrity was unknowingly violated on October 26, 2003, and November 26, 2006, as a result of opening manual containment isolation valve SI-410 (Safety injection Tanks Fill/Drain Valve). This occurred during a surveillance test (ST), when containment integrity was required and administrative controls (dedicated operator) were not implemented.

In preparation for performing a leak check of the safety injection tanks leakoff piping, a procedural step in the ST opened manual containment isolation valve SI-410, as well as re-aligning other valves. The procedure prerequisites require the reactor coolant system be pressurized above 600 psig, which results in the reactor coolant system being greater than 210 deg F; thus, containment integrity is required.

Prior to the subsequent performance of the ST on November 1, 2009, it was recognized that the opening of SI-410 needed to be administratively controlled. The ST was revised to require administrative controls be in place prior to opening containment isolation valve SI-410.

The root cause analysis for this event is the reviewer of the change to QC-ST-SI-3006 failed to identify the conflict between required test conditions (i.e., RCS temperature greater than 210 deg F and containment integrity is required) and opening SI-410 (i.e., manual containment isolation valve).

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NARRATIVE

BACKGROUND

Containment integrity is defined in the Fort Calhoun Station (FCS) Technical Specifications (TS) as:

- (1) All non-automatic containment isolation valves which are not required to be open during accident conditions and blind flanges, except for valves that are open under administrative control as permitted by Specification 2.6(1)a, are closed.
- (2) The equipment hatch is properly closed and sealed.
- (3) The personnel air lock satisfies Specification 2.6(1)b.
- (4) All automatic containment isolation valves are operable, locked closed, or deactivated and secured in their closed position (or isolated by locked closed valves or blind flanges as permitted by a limiting condition for operation).
- (5) The uncontrolled containment leakage satisfies Specification 3.5, and
- (6) The sealing mechanism associated with each penetration (e.g., welds, bellows or O-rings) is operable.

TS section 2.6(1)a, states "Containment integrity shall not be violated unless the reactor is in a cold or refueling shutdown condition. Without containment integrity, it must be restored within one hour or the plant must be in at least hot shutdown within the next six hours, or be subcritical and less than 300 degrees F within the next six hours and in cold shutdown within the following 30 hours. Normally locked or sealed-closed valves (except for PCV-742A/B/C/D) may be opened intermittently under administrative control without constituting a violation of containment integrity."

EVENT DESCRIPTION

Containment integrity was unknowingly violated on October 26, 2003, and November 26, 2006. This was a result of opening manual containment isolation valve SI-410 (Safety injection Tanks Fill/Drain Valve) when containment integrity was required and administrative controls (dedicated operator) were not implemented.

Prior to November 2009, a step existed in QC-ST-SI-3006, "Safety Injection Leakoff Piping Forty Month Functional Test," to open manual containment isolation valve SI-410, as well as re-aligning other valves, in preparation for performing a leak check of the safety injection tanks leakoff piping. The procedure prerequisites require the reactor coolant system be pressurized above 600 psig, which results in the reactor coolant system being greater than 210 deg F and containment integrity being required. Prior to the ST being performed on November 1, 2009, it was recognized by a shift manager that the opening of SI-410 needed to be administratively controlled in order to be in compliance with TS 2.6(1)a.

On November 1, 2009, a revision was made to QC-ST-SI-3006. A note, a caution, and a step were added at the beginning of the procedure section to require that a dedicated operator be assigned to close manual containment isolation valve SI-410 (Safety injection Tanks Fill/Drain Valve) when directed by the control room, to establish containment integrity.

Nuclear Safety Review Group (NSRG) and System Engineering (SE) personnel performed a review of past performances of QC-ST-SI-3006. The review determined that the station unknowingly entered and subsequently violated TS 2.6(1)a on October 26, 2003 and November 26, 2006 as a result of opening valve SI-410 when containment integrity was required and administrative controls (dedicated operator) were not implemented.

This issue was identified and documented in Condition Report (CR) 2009-6365.

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NARRATIVE

CONCLUSION

The cause of this event is failure of the reviewer of the test procedure to identify and resolve the conflict between required test conditions (i.e., RCS temperature greater than 210 deg F and containment integrity required) and opening SI-410 (i. e., manual containment isolation valve).

CORRECTIVE ACTIONS

Procedure QC-ST-SI-3006 was revised to require that administrative controls be in place prior to opening containment isolation valve SI-410. Additional actions will be administered by the corrective action system.

SAFETY SIGNIFICANCE

There was no impact to safety in ways previously not evaluated in the USAR. Since the plant was in mode 3, the opening of SI-410 without administrative control constituted a violation of containment integrity per TS 2.6(1)a. However, SI-410 being open did not provide a leak pathway from containment to external atmosphere. Pressure boundary was maintained during the test since valves HCV-2983 and SI-185 were closed for the portion of the piping that was outside of containment. HCV-2983 and SI-185 are a normally closed automatic valve and normally locked closed manual valve, respectively. For the performances of QC-ST-SI-3006 during the 2003 and 2006 refueling outages (RFOs), control room log data indicate that SI-185 and HCV-2983 were both closed during performances of the test. Therefore, the containment integrity violation was entirely administrative and nuclear safety was not compromised.

SAFETY SYSTEM FUNCTIONAL FAILURE

This event does not result in a safety system functional failure in accordance with NEI-99-02.

PREVIOUS SIMILAR EVENTS

LER 1988-011, LER 1991-027, LER 1992-002, LER 2008-002