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August 26, 2010
LIC-10-0050

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

Reference: Docket No. 50-285

Subject: Licensee Event Report 2010-001, Revision 1, for the Fort Calhoun Station

Please find attached Licensee Event Report 2010-001, Revision 1, dated August 26, 2010. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B).

No regulatory commitments are contained in this submittal. If you should have any questions, please contact me.

Sincerely,

John R. Goodell
Division Manager
Nuclear Performance Improvement and Support

JRG/epm

Attachment

c: E. E. Collins, NRC Regional Administrator, Region IV
L. E. Wilkins, NRC 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 infocollect@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 Violated During Refueling Leak Test Due to Inadequate Training

5. EVENT DATE

| MONTH | DAY | YEAR |
|-------|-----|------|
| 11 | 01 | 2009 |

6. LER NUMBER

| YEAR | SEQUENTI AL NUMBER | REV NO |
|------|--------------------------|-----------|
| 2010 | - 001 - | 01 |

7. REPORT DATE

| MONTH H | DAY | YEAR |
|------------|-----|------|
| 08 | 26 | 2010 |

8. OTHER FACILITIES INVOLVED

| FACILITY NAME | DOCKET NUMBER |
|---------------|---------------|
| | 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 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 (include Area Code)

402-533-6855

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

| CAUSE | SYSTEM | COMPONEN T | 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) ☒ NO15. EXPECTED
SUBMISSION
DATE

MONTH DAY YEAR

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

Containment integrity was violated on November 1, 2009. This was a result of opening manual containment isolation valve SI-410 (Safety injection Tanks Fill/Drain Valve) when containment integrity was required and inadequate administrative controls were implemented. In preparation for performing a leak check of the safety injection tanks leakoff piping, a procedural step in the surveillance test opened manual containment isolation valve SI-410, as well as re-aligning other valves. The procedure prerequisites require the reactor coolant system to be pressurized above 600 psig, which results in the reactor coolant system being greater than 210 degrees F; thus, containment integrity is required.

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

A root cause analysis determined that training on containment integrity to specifically meet the intent of TS 2.6(1)a, as defined in the TS basis section, is insufficient to ensure complete understanding of the requirements.

The revision of training materials, retraining of appropriate plant personnel and revisions to appropriate plant documents will be administered using the station's corrective action program.

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 |
| | | 2010 - | 001 | - 01 | |

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, restore containment integrity within one hour or be in at least hot shutdown within the next 6 hours, in at least subcritical and less than 300 degrees F within the next 6 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."

The TS basis provides the following additional information:

"The opening of locked or sealed closed containment isolation valves on an intermittent basis under administrative control includes the following considerations: (1) stationing an operator, who is in constant communication with the control room, at the valve controls, (2) instructing this operator to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to close the valves and that this action will prevent the release of radioactivity outside the containment."

EVENT DESCRIPTION

Containment integrity was violated on November 1, 2009. This was a result of opening manual containment isolation valve SI-410 (Safety injection Tanks Fill/Drain Valve) when containment integrity was required and inadequate administrative controls were implemented.

Prior to November 1, 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 (Safety Injection Tanks Fill/Drain Valve), 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 degrees Fahrenheit and containment integrity 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. However, this thought was in error since the TS bases prohibit this valve from being opened when the plant is greater than 210 degrees Fahrenheit.

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CONTINUATION SHEET**

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|----------------------|-----------|---------------|----------------------|------------|---------|
| Fort Calhoun Station | 05000285 | YEAR | SEQUENTIAL NUMBER | REV NO. | 3 OF 3 |
| | | 2010 - | 001 - | 01 | |

NARRATIVE

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 an operator be assigned to close manual containment isolation valve SI-410 when directed by the control room, to establish containment integrity. However, environmental conditions during an accident could preclude an operator from shutting SI-410 during an accident.

An extent of condition review from LER 2009-004 noted the violation of the TS basis information. The review determined that the station entered and subsequently violated TS 2.6(1)a on November 1, 2009, as a result of opening valve SI-410 when containment integrity was required.

This issue was identified and documented in Condition Report (CR) 2010-1664.

This event is being reported per 10 CFR 50.73(a)(2)(i)(B).

CONCLUSION

A root cause analysis determined that training on containment integrity to specifically meet the intent of TS 2.6(1)a, as defined in the TS basis section, is insufficient to ensure complete understanding of the requirements.

CORRECTIVE ACTIONS

The revision of training materials and retraining of appropriate plant personnel will be administered using the station's corrective action program. Revisions to appropriate plant documents will also be administered by the corrective action program.

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 the external atmosphere. Pressure boundary was maintained during the test since the downstream isolation valves were closed for the portion of the piping that was outside of containment. The downstream isolation valves are a normally closed automatic valve and normally locked closed manual valve. For the performances of QC-ST-SI-3006 during the 2003, 2006 and 2009 refueling outages (RFOs), control room log data indicate that the downstream isolation valves 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 and LER 2009-004