WOLF CREEK
NUCLEAR OPERATING CORPORATION

July 13, 2010

Stephen E. Hedges
Site Vice President

WO 10-0046

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Reference: Letter WO 10-0007, dated January 18, 2010, from M. W. Sunseri, WCNOC, to USNRC

Subject: Docket No. 50-482: Licensee Event Report 2009-010-01, Failure to Meet LCO 3.0.4b. During Transition from Mode 4 to Mode 3

Gentlemen:

The Reference submitted Licensee Event Report (LER) 2009-010-00 in accordance with 10 CFR 50.73, "Licensee event report system," paragraph (a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications (TS). The LER stated that a supplement would be sent providing the cause of the event and additional actions being taken. The enclosed LER provides that information. Changes are annotated in the margins.

The Attachment provides a list of regulatory commitments. If you have any questions concerning this matter, please contact me at (620) 364-4190, or Mr. Richard D. Flannigan, Manager Regulatory Affairs at (620) 364-4117.

Sincerely,

Stephen E. Hedges

SEH/rlt

Attachment
Enclosure

cc: E. E. Collins (NRC), w/a, w/e
G. B. Miller (NRC), w/a, w/e
B. K. Singal (NRC), w/a, w/e
Senior Resident Inspector (NRC), w/a, w/e

JE22
LER

## LIST OF REGULATORY COMMITMENTS

The following table identifies those actions committed to by WCNOC in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Mr. Richard Flannigan at (620) 364-4117.

| REGULATORY COMMITMENT | DUE DATE/EVENT |
|---|---|
| A new procedure will be created to provide instructions and requirements for performing a Technical Specification LCO 3.0.4 Mode Change Review. | October 10, 2010 |

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION
(9-2007)

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2010

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 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.

# LICENSEE EVENT REPORT (LER)

(See reverse for required number of

| 1. FACILITY NAME | 2. DOCKET NUMBER | 3. PAGE |
|---|---|---|
| WOLF CREEK GENERATING STATION | 05000 482 | 1 OF 4 |

**4. TITLE**
Failure to Meet LCO 3.0.4b. During Transition from Mode 4 to Mode 3

| 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 |
| 11 | 18 | 2009 | 2009 | - 010 - | 01 | 07 | 13 | 2010 | FACILITY NAME | DOCKET NUMBER |
| | | | | | | | | | | 05000 |

**9. OPERATING MODE**
4

**10. POWER LEVEL**
000

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

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☒ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☐ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

**12. LICENSEE CONTACT FOR THIS LER**

| FACILITY NAME | TELEPHONE NUMBER (Include Area Code) |
|---|---|
| Richard D. Flannigan, Manager Regulatory Affairs | (620) 364-4117 |

**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 |
|---|---|---|
| | | |


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

On November 17, 2009, at 2353 hours Central Standard Time (CST), Control Room personnel authorized the transition from Mode 4, Hot Shutdown, to Mode 3, Hot Standby, in accordance with Limiting Condition for Operation (LCO) 3.0.4b. with the turbine driven auxiliary feedwater (AFW) pump inoperable. Heat-up activities were in progress to return the plant to service following a refueling outage with the plant ready to transition from Mode 4 to Mode 3 with the exception of completing some work activities and post maintenance testing to restore the turbine driven AFW pump to a functional status.

A risk assessment was completed as required by LCO 3.0.4b. and identified that protected train signs may be posted as deemed necessary. On November 18, 2009, at 0024 hours, the plant transitioned from Mode 4 to Mode 3 under the provisions of LCO 3.0.4b. for the turbine driven AFW pump with no protected equipment signs posted for the motor driven AFW pump rooms.

On December 17, 2009, at a weekly meeting with the NRC Resident Inspector, the inspector identified a potential violation of LCO 3.0.4b. for not establishing risk management actions prior to transitioning from Mode 4 to Mode 3 as required by the technical specification. The risk management action not established was protected equipment signage for the motor driven AFW pump rooms.

NARRATIVE

PLANT CONDITIONS PRIOR TO EVENT:

MODE – 4

Power - 0

EVENT DESCRIPTION:

On November 17, 2009, heat-up activities were in progress to return the plant to service following a refueling outage with the plant ready to transition from Mode 4 to Mode 3 with the exception of completing some work activities and post maintenance testing to restore the turbine driven auxiliary feedwater (AFW) pump [EIIS Code: BA] to a functional status.

Procedure AP 22C-003, "Operational Risk Assessment Program," specifies that this procedure is applicable in Modes 1, 2, or 3. An Operational Risk Assessment was prepared for the period November 17, 2009 through November 22, 2009, in preparation for transitioning from Mode 4 to Mode 3 and plant startup on November 17. The day-shift Shift Manager had annotated Section 5.3, "Compensatory measures added because of unscheduled activities" of the Operational Risk Assessment at 1705 hours Central Standard Time (CST). The annotation specified that when entering Mode 3 with the turbine driven AFW pump inoperable, protected equipment signs should be placed on the motor driven AFW pump room doors. However, this Operational Risk Assessment was not in effect since the plant had not transitioned to Mode 3.

A separate risk assessment for entering Mode 3 from Mode 4 with the turbine driven AFW pump inoperable was completed as required by Limiting Condition for Operation (LCO) 3.0.4b. and provided the following in Block 5, "Comments/Risk Management Actions/Compensatory Measures":

> It is expected that the PAL02 activity will work around the clock to minimize the unavailability time of the pump. Protected train signs may be posted as deemed necessary. Without PAL02, it will be a good practice (prior to the mode change) to verify with the Transmission Operator that there are no known grid stability issues. This would be in addition to the hourly predictive grid assessment by the Transmission Operator. No additional precautions or compensatory measures beyond those discussed in AP 22C-003 Attachment B are deemed necessary.

The transition from Mode 4 to Mode 3 did not occur during the day-shift on November 17, 2009. The night-shift Shift Manager in preparation for transitioning from Mode 4 to Mode 3 determined that plant conditions did not warrant the placement of the protected equipment signs on the motor driven pump rooms. However, the Operational Risk Assessment was not updated to reflect this determination.

On November 17, 2009, at 2353 hours, Control Room personnel authorized the transition from Mode 4, Hot Shutdown, to Mode 3, Hot Standby, in accordance with LCO 3.0.4b. with the turbine driven AFW pump inoperable and no specific risk management actions required.

On November 18, 2009, at 0024 hours, the plant transitioned from Mode 4 to Mode 3 under the provisions of LCO 3.0.4b. for the turbine driven AFW pump being inoperable with no protected equipment signs for the motor driven AFW pump rooms.

The turbine driven AFW pump was declared operable on November 19, 2009 at 0433 hours.

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BASIS FOR REPORTABILITY:

This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B), to report a TS LCO 3.0.4b. violation that occurred when the plant entered a specified mode without establishing the specified risk management action.

TS LCO 3.0.4 states, in part "When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications; or" .....

On December 17, 2009, at a weekly meeting with the NRC Resident Inspector, the inspector identified a potential violation of LCO 3.0.4b. for not establishing risk management actions prior to transitioning from Mode 4 to Mode 3 as required by the technical specification. The risk management action not established was protected equipment signage for the motor driven AFW pump rooms.

During the period of time when the turbine driven AFW pump was inoperable, at least one motor driven AFW pump was operable and capable of providing the feedwater flow required for removal of decay heat. As such, review of this event determined that it did not meet the criteria for reporting under 10 CFR 50.73(a)(2)(v) as an event or condition that could have prevented the fulfillment of a safety function.

CAUSE:

The Shift Manager failed to ensure the protected train signs were placed as annotated in the Operational Risk Assessment. No formal process existed to ensure the risk assessment performed for LCO 3.0.4b. was compatible with the applicable Shutdown Risk Assessment or Operational Risk Assessment required for normal mode transition.

ACTIONS TAKEN:

On November 18, 2009, the day-shift Shift Manager reviewed current plant conditions and after consultation with the Outage Control Center Operations Manager posted protected equipment signs on the motor driven AFW pump room doors based on procedure AI 22C-10, "Operations Work Controls."

Procedure AI 22C-010, "Operations Work Controls," has been revised to state that protected equipment signs will be placed to limit access to equipment that is protected in accordance with the risk assessment.

A new procedure will be created to provide instructions and requirements for performing a TS LCO 3.0.4 mode change review, by October 10, 2010.

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SAFETY SIGNIFICANCE:

The AFW System mitigates the consequences of any event with loss of normal feedwater. The design basis of the AFW System is to supply water to the steam generator to remove decay heat and other residual heat by delivering at least the minimum required flow rate to the steam generators at pressures corresponding to the lowest steam generator safety valve set pressure plus 3% accumulation. In addition, the AFW System must supply enough makeup water to replace steam generator secondary inventory lost as the unit cools to MODE 4 conditions. Sufficient AFW flow must also be available to account for flow losses such as pump recirculation and line breaks. The AFW System consists of two motor driven AFW pumps and one steam turbine driven pump configured into three trains. Each motor driven pump provides 100% of the feedwater flow required for removal of decay heat from the reactor. During the period of time when the turbine driven AFW pump was inoperable, at least one motor driven AFW pump was operable and capable of providing the feedwater flow required for removal of decay heat.

OPERATING EXPERIENCE/PREVIOUS EVENTS:

Amendment No. 155 dated October 7, 2004, approved changes to the TS requirements for Mode change limitations in LCO 3.0.4 and Surveillance Requirement (SR) 3.0.4. The changes to the TSs were based on Technical Specification Task Force (TSTF) Standard TS (STS) Change Traveler TSTF-359, Revision 9, "Increase Flexibility in MODE Restraints." Since the implementation of Amendment No. 155, LCO 3.0.4b. has been invoked 3 times (including this event). A review was performed for similar events at WCGS where a Mode change was not performed in accordance with the requirements of LCO 3.0.4b. No events of this type were identified since the implementation of Amendment No. 155.

LER 2008-008-02 reported entering Mode 4 from Mode 3 at the beginning of Refueling Outage 16 and entering Mode 3 from Mode 4 at the end of Refueling Outage 16 without ensuring that the Residual Heat Removal System [EIIS Code: BP] was operable.

LER 2008-006-00 reported entering Mode 4 from Mode 5 with a containment spray train [EIIS Code: BE] inoperable. A post maintenance visual weld examination for leakage had not been completed as required by the In-service Testing Program prior to Mode 4 entry.