W☉LF CREEK
NUCLEAR OPERATING CORPORATION

Matthew W. Sunseri
Vice President Operations and Plant Manager

October 15, 2009

WO 09-0035

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

Subject: Docket No. 50-482: LER 2009-003, Post Fire Safe Shutdown
Issue During Postulated Control Room Fire

Gentlemen,

The enclosed Licensee Event Report (LER) 2009-003-00 is being submitted pursuant to 10 CFR 50.73(a)(2)(ii)(B). This is in regard to the time it takes to manually close a valve in response to a control room fire being outside the time assumed in the thermal hydraulic analysis.

Commitments made by Wolf Creek Nuclear Operating Corporation in the enclosed LER are identified in the Attachment to this letter.

If you have any questions concerning this matter, please contact me at (620) 364-4008, or Mr. Richard D. Flannigan, Manager Regulatory Affairs at (620) 364-4117.

Sincerely,

Matthew W. Sunseri

MWS/rlt

Attachment
Enclosure

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

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 Commitments	Due Date
BNHV8812B was manually stroked on 9/23/2009 and the results recorded. Manually stroking of BNHV8812A is scheduled to occur during the current refueling outage. Based on the times, the thermo-hydraulic analysis will be revised using these more accurate times.	11/30/2009
Submit supplement to LER 2009-003 based on results of ongoing corrective actions.	12/16/2009

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Wolf Creek Generating Station	05000 482	1 OF 3

4. TITLE

Post Fire Safe Shutdown Issue during Postulated Control Room Fire

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
08	19	2009	2009	003	00	10	15	2009	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: *(Check all that apply)*
1	☐ 20.2201(b) ☐ 20.2203(a)(3)(i) ☐ 50.73(a)(2)(i)(C) ☐ 50.73(a)(2)(vii)

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

10. POWER LEVEL

100

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
X	BP	ISV							

14. SUPPLEMENTAL REPORT EXPECTED		15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☐ NO					

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

It was discovered that a valve used in off normal operations procedure OFN RP-017, "Control Room Evacuation," could not be manually closed in the required time. During a Control Room fire, BNHV8812A, which is the "A" Residual Heat Removal (RHR) pump suction from the Refueling Water Storage Tank (RWST), could not be closed in the one minute assumed in the thermal hydraulic analysis of the event. Wolf Creek Generating Station (WCGS) was not in a condition where it was necessary to operate the valve manually.

The cause of the event was determined to be a historical issue. During the development of OFN RP-017, it was assumed that all valves could be manually closed in one minute.

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NARRATIVE

BACKGROUND:

BNHV8812A, RWST to RHR "A" pump suction isolation valve, is normally open and is manually closed in OFN RP-017, "Control Room Evacuation," to prevent the RWST from draining to the containment sump in the event that EJHV8811A, containment recirculation sump to RHR "A" pump suction isolation valve, spuriously opens.

PLANT CONDITIONS PRIOR TO EVENT:

MODE - 1
Power - 100%
Normal Operating Temperature and Pressure

EVENT DESCRIPTION:

BNHV8812A, the "A" Residual Heat Removal (RHR) pump suction from the Refueling Water Storage Tank (RWST), is manually closed in off normal operations procedure OFN RP-017, "Control Room Evacuation," in response to a Control Room fire. The valve was never closed to establish the baseline time. During a simulated timing of BNHV8812A, it was always assumed that it took approximately one minute to close the valve.

During discussion with the motor operated valve (MOV) engineer it was revealed that valve BNHV8812A has been calculated to take 600 turns to close. An Operations Standing Order limits the number of handwheel turns to 60 turns per minute. A Safety Bulletin on Limitorque Actuators was issued on June 2004, as a result of a valve operator catastrophic failure that resulted in a fatality at Crystal River fossil plant. This Safety Bulletin limits the number of handwheel turns to 60 turns per minute. At a closure rate of 60 turns per minute, it would take a minimum of 10 minutes to close the valve, rather than the assumed one minute. The additional nine minutes necessary to close the valve will delay the completion of subsequent steps in procedure OFN RP-017. Most significantly, the time to establish charging flow increases from 20 minutes to a minimum of 29 minutes. Thermal hydraulic analysis assumes charging flow will be established within 28 minutes. Therefore, the time to establish charging flow exceeds that assumed in the thermal hydraulic analysis by at least one minute.

This issue was found to be a historical issue. Since procedure OFN RP-017 was first implemented, it had always been assumed that all valves could be manually closed within one minute. Manually closing and timing BNHV8812A was never performed.

Only one other MOV was found that would take more than one minute to manually operate locally, however that valve is expected to be in its required position. If it must be manually operated, it is estimated to take two and one half minutes to place in the correct position. This would not adversely impact the safety analysis.

BASIS FOR REPORTABILITY:

This condition, Event Notification 45277, is reportable pursuant to 10 CFR 50.73(a)(2)(ii)(B) for any event or condition that resulted in the nuclear power plant being in an unanalyzed condition that significantly degraded plant safety. Additionally, WCNOC made an eight hour Emergency Notification System call in accordance with 10 CFR 50.72(b)(3)(ii)(B).

CAUSE:

The cause of this issue is historical in nature. An invalid assumption was made that all the valves could be manually closed in one minute.

CORRECTIVE ACTIONS:

Procedure OFN RP-017 was revised. Attachment E of the procedure, "BN HV-8812A Closure", was created with the sole purpose of closing BNHV8812A. This separated it from the sequence of actions that align charging flow. The additional operator performing Attachment E will ensure response time meets the required limits.

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NARRATIVE

CORRECTIVE ACTIONS:

Additional actions have not been fully completed.   BNHV8812B was manually stroked on 9/23/2009 and the time was recorded. Manually stroking of BNHV8812A is scheduled to occur during the current refueling outage. Based on the times, the thermo-hydraulic analysis will be updated.

SAFETY SIGNIFICANCE:

A fire in the Control Room of such magnitude and severity as to cause an evacuation and plant shutdown is extremely unlikely. The combustible loading in the Control Room is low and interior finish materials meet or exceed the surface flammability requirements of applicable standards. The cables entering the control room are IEEE 383 rated. Large concentrations of cables in the control room trenches are protected with an automatic Halon extinguishing system. Additionally, automatic smoke detectors are located in the control cabinets and trenches.

A fire, causing the evacuation of the Control Room, did not occur. This condition resulted in no significant safety consequences and the health and safety of the public were not affected at any time.

PREVIOUS OCCURRENCES:

LER 2005-006-00 described a timed walk down for restoring Reactor Coolant Pump seal cooling , for a shutdown outside the Control Room, did not meet the required time.