WOLF CREEK
NUCLEAR OPERATING CORPORATION

Stephen E. Hedges
Vice President Operations and Plant Manager

July 21, 2006

WO 06-0034

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

Subject: Docket No. 50-482: Licensee Event Report 2006-002-00, Potential for Fire-Induced Damage to Class 1E Electrical Equipment Air Conditioning Units during an Appendix R Fire Event

Gentlemen:

The enclosed Licensee Event Report (LER) 2006-002-00 is being submitted pursuant to 10 CFR 50.73(a)(2)(ii)(B) regarding an unanalyzed condition that could potentially affect post-fire safe shutdown equipment availability at Wolf Creek Generating Station. This condition was identified during a review of Post Fire Shutdown capabilities.

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) 364-4190, or Mr. Kevin Moles at (620) 364-4126.

Very truly yours,

Stephen E. Hedges

SEH/rlt

Attachment
Enclosure

cc: J. N. Donohew (NRC), w/a, w/e
W. B. Jones (NRC), w/a, w/e
B. S. Mallett (NRC), w/a, w/e
Senior Resident Inspector (NRC), w/a, w/e

IE22

LIST OF COMMITMENTS

The following table identifies those actions committed to by Wolf Creek Nuclear Operating Corporation in this document. Any other statements in this letter are provided for information purposes and are not considered regulatory commitments. Please direct questions regarding these commitments to Mr. Kevin Moles, Manager Regulatory Affairs at Wolf Creek Generating Station, (620) 364-4126.

REGULATORY COMMITMENT	DUE DATE
A modification will be made to install a handswitch in the control room to provide the control room operators the ability to bypass the fire isolation signal on the Train "A" Class 1E electrical equipment air conditioning units.	January 31, 2009

NRC FORM 366 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 06/30/2007

Estimated burden per response to comply with this mandatory collection request: 50 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 digits/characters for each block)

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4. TITLE

Potential for Fire-Induced Damage to Class 1E Electrical Equipment Air Conditioning Units during an Appendix R Fire Event.

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
05	24	2006	2006	- 002 -	00	07	21	2006	FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE

1

10. POWER LEVEL

100

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

☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☑ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ OTHER
☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER *(Include Area Code)*
Kevin J. Moles, Manager Regulatory Affairs	(620) 364-4126

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

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 May 24,2006, while performing the Post Fire Safe Shutdown (PFSSD) review for fire area C-35, an unanalyzed condition was discovered. A design basis fire in fire area C-35 , located in the Control building, could prevent operation of both Class 1E electrical equipment air conditioning units. The postulated fire could damage cables associated with the automatic fire isolation circuit on the fan units. If the cables are damaged in a manner that causes an open circuit, the air conditioning units will shut down or fail to start.

Loss of the Class 1E air conditioning units does not directly result in loss of capability to safely shut down. Rather, room heating beyond design limits could reduce the life of electrical components within the switchgear.

A continuous fire watch was established for fire area C-35. The continuous fire watch was reduced to an hourly fire watch after a temporary procedure change was completed to allow the use of a jumper to restore the Train "A" Class 1E air conditioning unit to service.

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17. NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)*

Plant Conditions Prior to the Event:

MODE – 1
Power – 100 percent
Normal Operating Temperature and Pressure

Event Description:

The compliance strategy for post fire safe shutdown (PFSSD) at the Wolf Creek Generating Station is being reviewed to validate and rebaseline the analysis. The validation project has reconstituted a complete set of data for components/equipment and cables credited for coping with a "post-fire safe shutdown scenario" in accordance with our commitments to 10CFR50, Appendix R and the Wolf Creek Updated Safety Analysis Report Appendix 9.5B Fire Hazard Analyses in selected areas. The event identified by this LER was found during the re-validation of the fire area, C-35.

In the event of a fire detection signal in any of the vital Class 1E switchboard rooms, auxiliary contacts located in fire area C-35 will open, which will open contacts associated with the Class 1E electrical equipment air conditioning units and stop the air conditioning units. Cables associated with the auxiliary contacts are run in fire area C-35 which, if damaged, could cause a spurious shutdown of the Class 1E air conditioning units.

The Class 1E electrical equipment air conditioning units are included in the post fire safe shutdown (PFSSD) design to ensure adequate room cooling for the operating train of safety-related electrical equipment. The air conditioning units provide a support function for Class 1E electrical equipment required for safe shutdown. The loss of the Class 1E air conditioning units does not directly result in loss of capability to achieve and maintain safe shutdown in the event of a fire. Rather, room heating beyond design limits could reduce the life of electrical components within the switchgear.

Qualification data exists to show that some components within the switchgear will survive the expected room temperatures and be functional following a loss of room cooling. Data does not exist for each and every component within the switchgear, so a conclusive argument cannot be made regarding equipment functionality following a loss of room cooling. At that point, an eight-hour non-emergency report to the NRC Operations Center was made in accordance with 10 CFR 50.72(b)(3)(ii)(B).

Basis for Reportability:

The Wolf Creek commitment to 10CFR50, Appendix R, Section III.G states the following:

"Redundant trains of systems required to achieve and maintain hot standby are separated by 3-hour rated fire barriers, or the equivalent provided by III.G.2, or else a diverse means of providing the safe shutdown capability exists and is unaffected by the fire."

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17. NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)*

Based on the event described above and the fact that Wolf Creek Nuclear Operating Corporation (WCNOC) does not have a diverse means in place for providing the safe shutdown capability required, WCNOC made an eight hour Emergency Notification System call in accordance with 10 CFR 50.72(b)(3)(ii)(B).

This condition is also 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.

Root Cause:

This is a historical problem rooted in changes to the standards over time, and in non-validated assumptions made by the Architect-Engineer for their Electrical Fire Hazards Analysis (EFHA) at the time of construction and insufficiently documented at that time. Due to the historical nature of these facts, a specific root cause cannot be determined.

Corrective Actions:

A continuous fire watch was established for fire area C-35. The continuous fire watch was reduced to an hourly fire watch after a temporary procedure change was completed to allow the use of a jumper to restore a Class 1E air conditioning unit to service.

A modification will be made to install a handswitch in the control room (Panel RP068) to provide the control room operators the ability to bypass the fire isolation signal on the Train "A" Class 1E electrical equipment air conditioning units. This modification and resulting changes to off-normal procedure OFN KC-016 will be completed by January 31, 2009.

Safety Significance:

This issue is of low safety significance due to the extremely conservative assumptions made for this failure to occur. Loss of the Class 1E electrical equipment air conditioning units does not automatically cause inoperability of the associated Class 1E electrical equipment. There is reasonable assurance that safe shutdown can be achieved without Class 1E electrical equipment room cooling. In addition, the combined fixed and allowed transient fire loading is low. Therefore, a fire with sufficient severity to cause damage to cables in area C-35 is not credible.

Operating Experience/Previous Events:

LER 2005-005-00 reported a condition where a postulated fire could cause the loss of the centrifugal charging pump's capability to successfully inject borated water into the reactor. This condition was caused by the original EFHA having non-validated assumptions and being insufficiently documented.

LER 2005-007-00 reported a condition where a postulated fire could cause the loss of field flashing for the 'B' train Emergency Diesel Generator. This condition was caused by the original EFHA completed for the Wolf Creek Generating Station not identifying that field flashing may not be available if a fire occurs in the control room.