WOLF CREEK
NUCLEAR OPERATING CORPORATION

June 18, 2012

Russell A. Smith
Plant Manager

WO 12-0050

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

Subject: Docket No. 50-482: Licensee Event Report 2012-003-00, "B Train ECCS Inoperable Due to Damaged Watertight Containment Spray Pump Door Seal"

Gentlemen:

The enclosed Licensee Event Report (LER) is being submitted pursuant to 10CFR50.73(a)(2)(i)(B) and 10CFR50.73(a)(2)(v) regarding one train of Emergency Core Cooling System being inoperable due to a damaged door seal.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4156, or Mr. Gautam Sen at (620) 364-4175.

Sincerely,

Russell A. Smith

RAS/rlt

Enclosure

cc: E. E. Collins (NRC), w/e
J. R. Hall (NRC), w/e
N. F. O'Keefe (NRC), w/e
Senior Resident Inspector (NRC), w/e

IE22
NRR

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION
(10-2010)

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2013

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 digits/characters for each block)

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

4. TITLE

B Train ECCS and Containment Spray System Inoperable Due to Damaged Watertight Containment Spray Pump Door Seal

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
01	14	2012	2012	003	00	06	18	2012	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE

Mode 5

10. POWER LEVEL

0

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)
Gautam Sen, Manager Regulatory Affairs	(620) 364-4175

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 April 17, 2012, at 1453 Central Daylight Time, the watertight door seal for the B train Containment Spray (CS) Pump room was determined to be nonfunctional and the equipment supported by the door was inoperable. The equipment supported by the door is the B train Emergency Core Cooling System and the B train CS System. The door was repaired on April 18, 2012 at 1448 CDT. The watertight seal was replaced, welding was performed on the knife-edge of the door and the door lugs were tightened.

The direct cause of this condition was due to door knife-edge damage and age degradation and hardening of the door seal. The apparent cause of this condition was a less than adequate preventative maintenance to identify potentially deficient door seals.

PLANT CONDITIONS AT THE TIME OF THE EVENT

Mode 5
0 % power
The plant was in the process of cooling down after experiencing a loss of off site power.
No inoperable structures, components or systems, other than the B train of Emergency Core Cooling System (ECCS) and Containment Spray (CS) System [EIIS Code: BE-P].

DESCRIPTION OF THE EVENT:

A loss of off site power occurred on January 13, 2012 that led to the loss of power to the Auxiliary Building [EIIS Code: NF] sump pumps and the Residual Heat Removal (RHR) [EIIS Code: BO] room sump pumps. A rising water level in the sump area outside the A train and B train CS pump rooms was identified on January 14, 2012. Water leakage was observed in the B train CS pump room through the B train CS pump door seal on January 14, 2012. An initial functionality review of the leaking door seal incorrectly concluded that the door was functional but degraded.

On April 17, 2012, the Operations review of condition reports resulted in the identification that prior functionality assessment of the B train CS pump room door seal were incorrect. On April 17, 2012, at 1453 Central Daylight Time (CDT), the watertight door seal for the B train CS pump room was determined to be nonfunctional and the equipment supported by the door was inoperable. The equipment supported by the door is the B train ECCS and the B train CS System.

The door was repaired on April 18, 2012 at 1448 CDT. The watertight seal was replaced, welding was performed on the knife-edge of the door and the door lugs were tightened.

BASIS FOR REPORTABILITY:

The discovery date for the door failure is January 14, 2012 since there is no firm evidence when the failure actually occurred. The plant began a forced outage and entered Mode 5 on January 14, 2012 at 0750 CDT exiting the mode of applicability. During plant startup, the plant entered Mode 4 on March 17, 2012 at 2154 and Mode 3 on March 19, 2012 at 0327. The door was repaired on April 18, 2012. During the time period that the B CS pump room door was nonfunctional, the B train ECCS and the B train CS System were available but inoperable. Technical Specification (TS) 3.5.2 requires two trains of ECCS to be operable in Modes 1, 2, and 3. TS 3.5.3 requires one train of ECCS to be operable in Mode 4. TS 3.6.6 requires two containment spray trains to be operable in Modes 1, 2, 3, and 4. This event is reportable under 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by TS 3.5.2, 3.5.3, 3.6.6, and Limiting Condition of Operation (LCO) 3.0.4.

During the time that the B train ECCS was inoperable, individual components of the A train ECCS and the A train CS pump were periodically taken out of service, normally for routine maintenance. The ECCS components were the centrifugal charging pump [EIIS Code: BQ-P], safety injection pump [EIIS Code: BQ-P], and the RHR pump [EIIS Code: BO-P]. During these times, both trains of the individual components were inoperable. The following table shows the times out of service (OOS). This condition is reportable pursuant 10 CFR 50.73(a)(2)(v) as an event or condition that could have prevented the fulfillment of a safety function.

Date	Component	OOS time
3/25/2012	A SI pump	~1 minute
3/26/2012	A RHR pump	~1 hour
3/29/2012	A RHR pump	~13.75 hours
3/30/2012	A CCP	~14 minutes
4/3/2012	A SI pump	~29.75 hours
4/4/2012	A RHR pump	~2.6 hours
4/5/2012	A CS pump	~13 hours

ROOT CAUSE:

The direct cause of this condition was due to door knife-edge damage and age degradation and hardening of the door seal. The apparent cause of this condition was less than adequate preventative maintenance to identify potentially deficient door seals.

Procedure MPM XX-002, "Watertight Doors Preventative Maintenance Activities," did not provide clear guidance on inspection points and acceptance criteria for all components on a watertight door. This included bushing adjustments, door seal pliability, knife-edge smoothness and grease testing steps.

CORRECTIVE ACTIONS:

The B train CS pump room door was repaired on April 18, 2012. The watertight seal was replaced and welding was performed on the knife-edge of the door. This action restored compliance.

Procedure MPM XX-002 will be revised to provide clear guidance on inspection points and acceptance criteria for components on a watertight door.

SAFETY SIGNIFICANCE:

During the time that the door seal was nonfunctional, a flooding event that would have affected the B train of ECCS did not occur. The B train of ECCS and CS System were available to perform their safety function. The A train of ECCS and CS System were operable and capable of performing their safety functions except for the brief periods when individual pumps were taken out of service for maintenance activities.

The CCP and SI pump are at an elevation five feet above the CS pump and the RHR pumps. It is unlikely that a flooding event would affect either the CCP or SI pump.

OPERATING EXPERIENCE/PREVIOUS SIMILAR OCCURRENCES:

None