WOLF CREEK
NUCLEAR OPERATING CORPORATION

Rick L. Gardner
Plant Manager

February 15, 2010

WO 10-0008

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

Subject: Docket No. 50-482: Licensee Event Report 2009-011-00, Intermediate Range Detector NI-36 Inoperable

Gentlemen:

The enclosed Licensee Event Report (LER) is being submitted 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 involves the failure to meet the TS Table 3.3.1-1 Function 18.a when the intermediate range detector NI-36 was considered to be inoperable during Cycle 16.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4156, or Mr. Richard D. Flannigan at (620) 364-4117.

Sincerely,

Rick L. Gardner

RLG/rlt

Enclosure

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

IE22
NRR

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

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 digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
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4. TITLE

Intermediate Range Detector NI-36 Inoperable

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
12	16	2009	2009	- 011 -	00	02	15	2010	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)
- ☐ 20.2201(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 December 16, 2009 the NRC Senior Resident Inspector proposed a violation of Technical Specification Table 3.3.1-1 Function 18.a. A Problem Identification and Resolution (PI&R) inspection sample was performed on Intermediate Range Detector NI-36 and identified that during Refueling Outages 14 and 15 the detector repeatedly failed non-Technical Specification procedure STN IC-236. In one case, the detector failed to go below the intermediate range neutron flux interlock (P-6). This resulted in the detector being inoperable in Cycles 15 and 16.

Events are reportable if they occurred within a timeframe of the previous three years. The last four months of Cycle 16 are in the three-year timeframe for reportability.

This condition is of low safety significance. The detector was replaced on April 10, 2008 during Refueling Outage 16.

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PLANT CONDITIONS PRIOR TO EVENT

MODE – 1
Power – 100

EVENT DESCRIPTION

On December 16, 2009 the NRC Senior Resident Inspector proposed a violation of Technical Specification Table 3.3.1-1 Function 18.a, Reactor Trip System Interlocks – Intermediate Range Neutron Flux, P-6. A Problem Identification and Resolution (PI&R) inspection sample was performed on Intermediate Range Detector NI-36 [EIIS Code: IG-DET] and identified that during Refueling Outages 14 and 15 the detector repeatedly failed non-Technical Specification procedure STN IC-236, "Intermediate Range N36 Compensation Voltage Adjustment." In one case, intermediate range detector NI-36 failed to go below the intermediate range neutron flux interlock (P-6). This resulted in the detector being inoperable in Cycles 15 and 16.

Due to an internal detector fault, the compensating voltage on the intermediate range detector was not effective which resulted in a high intermediate range indication. The intermediate range detectors are of the compensated ion chamber type and the compensating voltage is set such that the instrument can discriminate between neutron and gamma radiation. The design of the nuclear instrumentation system is such that the source range instruments are automatically energized when the neutron flux levels drop below the intermediate range neutron flux interlock (P-6). In one case, during a reactor shutdown on October 7, 2006, the intermediate range detector NI-36 did not reach the P-6 interlock value. The plant operators manually reset the source range channels [EIIS Code: IG-DET] and they operated properly.

Events are reportable if they occurred within a timeframe of the previous three years. The last four months of Cycle 16 are in the three-year timeframe for reportability.

Wolf Creek Generating Station (WCGS) had two plant shutdowns during the last four months of Cycle 16, on January 18, 2008 and March 17, 2008. During both of these plant shutdowns, intermediate range detector NI-36 operated properly and went below the P-6 setpoint. Intermediate range detector NI-36 detector was replaced on April 10, 2008 during Refueling Outage 16.

BASIS FOR REPORTABILITY

This condition is being reported because the NRC Senior Resident Inspector proposed a violation of Technical Specification Table 3.3.1-1 Function 18.a. WCGS had two plant shutdowns during the three-year reportability timeframe and prior to intermediate range detector NI-36 being replaced. In both shutdowns, intermediate range detector NI-36 operated properly and went below the P-6 interlock.

This condition is being reported per 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by Technical Specifications.

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ROOT CAUSE

The cause of the condition is historical. The intermediate range detector NI-36 was undercompensated.

CORRECTIVE ACTIONS

Intermediate range detector NI-36 was replaced on April 10, 2008 during Refueling Outage 16.

SAFETY SIGNIFICANCE

The safety significance of this condition is low. The abnormalities encountered with the Intermediate range detector NI-36 did not prevent maintaining the reactor in a safe shutdown condition. During the three-year timeframe for reportability, the intermediate range detectors operated properly. The intermediate range detector NI-36 was replaced in Refueling Outage 16.

OPERATING EXPERIENCE/PREVIOUS EVENTS

None.