ENERGY NORTHWEST

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GO2-11-143

10 CFR 50.73

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397**
LICENSEE EVENT REPORT NO. 2011-001-00

Dear Sir or Madam:

Transmitted herewith is Licensee Event Report No. 2011-001-00 for Columbia Generating Station. This report is submitted pursuant to 10 CFR 50.73(a)(2)(i)(B). The enclosed report discusses items of reportability and corrective actions taken related to non-compliance with Technical Specifications concerning Rod Position Indication. This discrepant condition was discovered on June 29, 2011.

There are no commitments being made to the NRC herein. If you have any questions or require additional information, please contact Ms. L.L. Williams at (509) 377-8148.

Respectfully,

B.J. Sawatzke
Vice President, Nuclear Generation & Chief Nuclear Officer

Enclosure: Licensee Event Report 2011-001-00

cc: NRC Region IV Administrator
NRC NRR Project Manager
NRC Senior Resident Inspector/988C
R.N. Sherman – BPA/1399
W.A. Horin – Winston & Strawn

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NRR

NRC FORM 366 (10-2010) U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 10/31/2013
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)	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 FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@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.

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
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4. TITLE
Failure to follow Technical Specification during Control Rod Exercise

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
06	29	2011	2011	001	00	08	29	2011	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING 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)	☐ 20.2203(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)*
Cherie D. Sonoda, Licensing Engineer	(509)377-8697

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
A									

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)*

On June 28, 2011, while the plant was in Mode 5 for refueling outage R20, Columbia Generating Station (Columbia) failed to enter a required Technical Specifications (TS) Action Statement while performing control rod exercises. During stroke time testing, control rod 34-47 displayed an erroneous indication. Upon initial withdrawal, the four rod display showed an alternating indication of "XX" (meaning the reed switch was not open during movement) and "00" (full in indication) requiring the position indication to be declared inoperable per TS 3.9.4. Control rod 34-47 was subsequently fully inserted and testing resumed on other rods contrary to the required action statement of TS 3.9.4. Upon discovery of the noncompliance, the TS required actions were subsequently performed and the failed reed switch replaced. The Control Room Supervisor and Shift Manager did not verify the required action statements specified in the TS and Bases as required. This was determined to be the apparent cause. A contributing cause included not performing all of the required steps in the procedure for control rod stroke time testing. Columbia has had no previous occurrences of a failure to enter the required action statement of TS 3.9.4.

This condition is reportable under 50.73(a)(2)(i)(B) as a condition prohibited by TS.

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NARRATIVE

Plant Condition

The plant was operating in Mode 5 at 0% power.

Event Description

On June 28, 2011, during the performance of control rod [ROD] stroke time testing, control rod 34-47 was given a continuous withdrawal signal. The Reactor Operator (RO) at the controls immediately noticed the four rod display initially indicated blank, as expected, then began alternating displays between "00" and "XX". It was noted that the green "full in" light cleared. The RO stopped the rod withdrawal and the display then indicated "XX" with the "full in" light still extinguished. The RO subsequently inserted the control rod to position "00" and its "full in" light was re-energized. The Control Room Supervisor (CRS) consulted the System Engineer and the Station Nuclear Engineer who indicated that that the failure was most likely due to the "00" reed switch being stuck closed. The crew continued with stroke timing achieving an additional full out / full in cycle on the next control rod. A work request was written to replace the rod position indication system (RPIS) probe containing the stuck reed switch on control rod 34-47.

On June 29, 2011, after review of the control rod exercises performed the previous day, it was determined that the "full in" position indication channel for control rod 34-47 was inoperable based on not meeting the requirements of TS SR 3.9.4.1. Since the control rod position indication channel was not declared inoperable and the required actions were not taken before movement of another rod, the station was in non-compliance with Technical Specification Action Statement (TSAS) 3.9.4.A while performing the additional control rod stroke timing following the initial encounter with the indication problems.

Immediate Corrective Actions

Upon discovery of the TS violation, Columbia entered TSAS 3.9.4.A for control rod 34-47 due to the erroneous indication during stroke timing. Control room staff performed the required actions to verify no in-vessel fuel movement, stop all control rod withdrawal and verify all control rods are full in. In addition, the control rod drive (CRD) [AA] for rod 34-47 was disarmed. A condition report was written documenting the failure to comply with TS Limiting Condition of Operation (LCO) 3.9.4. The responsible CRS and RO were removed from standing watch in the control room.

Causes

The CRS and SM did not verify and validate the control rod position indication surveillance requirements by reviewing the TS and Bases prior to proceeding with rod movement. A review of the TS and Bases is required prior to authorizing surveillance procedures and other maintenance and clearance order activities in accordance with Operations Department instructions. Failure to meet the requirement to review the TS and Bases was determined to be the apparent cause.

In addition, the RO performing the stroke time testing did not complete the last two steps in the associated procedure for stroke time testing. This presented a missed opportunity for the crew to discuss the control rod position indication and address the TS requirements indicated by the uncompleted procedure steps. This was identified as a contributing cause to this event.

NARRATIVE

Further Corrective Actions

The following corrective actions are planned or have been completed:

- Provided remediation training for the on-duty RO and CRS to address inadequate verification of required TS. (Completed)
- Developed training for licensed operators concerning shutdown TS. (In Progress)
- Reinforced expectations for TS implementation and verification through a night order. (Completed)
- Replaced the control rod RPIS probe for control rod 34-47. (Completed)

Assessment of Safety Consequences

The full-in position indication channel is required to be operable so that the refueling interlocks can ensure that fuel cannot be loaded with any control rod withdrawn and that no more than one control rod can be withdrawn at a time. These restrictions prevent inadvertent criticality during refueling operations. At the time that the rod position indication failed to meet the TS surveillance requirements, Columbia was not moving fuel, only one control rod was being withdrawn, and all other control rods were fully inserted. There was no potential for an inadvertent criticality. The plant remained within the assumptions of the safety analysis at all times. Withdrawal of control rod 34-47 was suspended and the rod was fully inserted prior to movement of another rod. This event was of low safety consequence.

Similar Events

A search of the last ten years of Columbia's condition reports and LERs showed no previous occurrences of a failure to enter the required action statement of TS 3.9.4. However, there have been four similar events in which other TS and their bases were not verified prior to performance of an evolution that resulted in a TS not being met at Columbia within the last ten years. These incidences are documented in LERs 2001-001-00, 2003-004-00, and 2004-001-00.

Energy Industry Identification System (EIIS) Information

EIIS codes are bracketed [ ] where applicable in the narrative.