

**ENERGY**  
**NORTHWEST**

P.O. Box 968 ■ Richland, Washington 99352-0968

June 21, 2001  
GO2-01-094

Docket No. 50-397

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

Gentlemen:

Subject: **COLUMBIA GENERATING STATION, OPERATING LICENSE NPF-21,  
LICENSEE EVENT REPORT NO. 2001-002-00**

Transmitted herewith is Licensee Event Report No. 2001-002-00 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 action taken.

Should you have any questions or desire additional information regarding this matter, please call me or Mr. RN Sherman at (509) 377-8616.

Respectfully,



GO Smith,  
Vice President, Generation  
Mail Drop PE04

Attachment

cc: EW Merschoff - NRC-RIV  
JS Cushing - NRC-NRR  
INPO Records Center  
NRC Sr. Resident Inspector - 988C (2)  
DL Williams - BPA/1399  
TC Poindexter - Winston & Strawn  
WB Jones - NRC RIV/fax

IE 22

**LICENSEE EVENT REPORT (LER)**(See reverse for required number of  
digits/characters for each block)

Estimated burden per response to comply with this mandatory information 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 Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington DC 20555-0001, or by internet e-mail to [bis1@nrc.gov](mailto:bis1@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 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.

FACILITY NAME (1)

Columbia Generating Station

DOCKET NUMBER (2)

50-397

PAGE (3)

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TITLE (4)

**NON-COMPLIANCE WITH TECHNICAL SPECIFICATION LCO 3.3.1.1 DUE TO A SCRAM DISCHARGE  
VOLUME LEVEL INSTRUMENT ISOLATION VALVE MISCONFIGURATION**

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
05	02	2001	2001	- 002	- 00	06	21	2001	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)							
POWER LEVEL (10)		88%	20.2201(b)			20.2203(a)(3)(ii)			50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
			20.2201(d)			20.2203(a)(4)			50.73(a)(2)(iii)	50.73(a)(2)(x)
			20.2203(a)(1)			50.36(c)(1)(i)(A)			50.73(a)(2)(iv)(A)	73.71(a)(4)
			20.2203(a)(2)(i)			50.36(c)(1)(ii)(A)			50.73(a)(2)(v)(A)	73.71(a)(5)
			20.2203(a)(2)(ii)			50.36(c)(2)			50.73(a)(2)(v)(B)	Other
			20.2203(a)(2)(iii)			50.46(a)(3)(ii)			50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)			50.73(a)(2)(i)(A)			50.73(a)(2)(v)(D)	
			20.2203(a)(2)(v)		X	50.73(a)(2)(i)(B)			50.73(a)(2)(vii)	
			20.2203(a)(2)(vi)			50.73(a)(2)(i)(C)			50.73(a)(2)(viii)(A)	
			20.2203(a)(3)(i)			50.73(a)(2)(ii)(A)			50.73(a)(2)(viii)(B)	

**LICENSEE CONTACT FOR THIS LER (12)**

NAME

Fred A Schill

TELEPHONE NUMBER (Include Area Code)

509 377 2269

**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX
A	JC	LS	M040	N					

**SUPPLEMENTAL REPORT EXPECTED (14)**

YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)**

On May 2, 2001 Columbia Generating Station was at 88% power and coasting down for a refueling outage when a condition prohibited by Technical Specification LCO 3.3.1.1 was discovered. The non-compliance was due to a condition in which less than the required number of channels per trip system were operable for the Scram Discharge Volume [JC] (SDV) Water Level - High function described in Technical Specification Table 3.3.1.1-1, Function 7.b. The instrument was inoperable for a period longer than the 12 hour Completion Time allowed in LCO 3.3.1.1 Condition A. This in turn, led to non-compliance with Required Action G.1 of LCO 3.3.1.1 to be in Mode 3 within 12 hours.

The SDV instrument channel had been inoperable since an instrument isolation valve was left in the closed position on February 5, 2001 following a Channel Functional Test. The valve was misconfigured due to a personnel error. There were no system failures associated with this event.

There were no safety consequences associated with this event because redundant instruments were capable of performing the safety function of actuating the Reactor Protection System if an actual SDV high water level condition had occurred.

Following discovery of the inoperable SDV level instrument, the instrument isolation valve was placed in the open position and the requirements of LCO 3.3.1.1 were subsequently met.

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

**Event Description:**

On May 2, 2001 with Columbia Generating Station at 88% power and coasting down for a refueling outage, a non-compliance with Technical Specification LCO 3.3.1.1 was discovered. The non-compliance was due to a condition in which less than the required number of channels per trip system were operable for the Scram Discharge Volume [JC] (SDV) Water Level - High function described in Technical Specification Table 3.3.1.1-1, Function 7.b. The division I displacer-type level switch was determined to have been inoperable for a period longer than the 12 hour Completion Time allowed in LCO 3.3.1.1 Condition A. This in turn, led to non-compliance with Required Action G.1 of LCO 3.3.1.1 to be in Mode 3 within 12 hours. The SDV level - High instrument channel was inoperable because the instrument isolation valve on the vent side of the displacer chamber was left in the closed position following a February 5, 2001 surveillance test.

**Immediate Corrective Action:**

Following performance of the quarterly Channel Functional Test (CFT) immediately after discovery of the inoperable SDV level instrument, the level switch was properly returned to service meeting the requirements of LCO 3.3.1.1. A review of maintenance and surveillance testing records was then conducted and a determination was made that the last time the instrument isolation valve had been manipulated was during performance of the previous quarterly Channel Functional Test on February 5, 2001. It was concluded that the instrument had been inadvertently left valved out of service and hence inoperable since that time. Additionally, a "hands on" verification of all instrument isolation valves on both SDV's was performed to ensure the valve misconfiguration was an isolated event. As part of the causal analysis of this event, the personnel who performed the February 5, 2001 CFT were interviewed to ascertain the facts surrounding the valve misconfiguration. The expectations for, and importance of, proper manual valve manipulation and position verification were reinforced with these individuals.

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

## Cause of the Event:

The valve misconfiguration occurred due to personnel error. The following discussion addresses the aspects of this event pursuant to 10 CFR 50.73(b)(2)(ii)(J)(2) to the extent that they apply. The valve manipulation steps in the surveillance procedure as it is currently written have been performed correctly numerous times by instrument technicians. This is not considered to be a cognitive error. The likelihood of this personnel error was increased by design, environmental, and test methodology factors. The design of the SDV, especially this division I SDV, introduces difficulty in identifying and accessing the instrument isolation valves. The process medium (basically reactor coolant) contained by the SDV following a reactor scram is highly radioactive resulting in higher exposures in the vicinity of the SDV even when the SDV is in its normally drained condition. For this reason, personnel performing testing and maintenance are instructed to minimize their time in the area in order to limit radiation dosage. As an additional measure to keep radiation dose ALARA, simultaneous verification of valve manipulations is performed visually by an individual located approximately 10 feet away. Additionally, the physical design of the SDV presents visual obstructions for the individuals when verifying valve manipulations.

## Further Corrective Action:

A corrective action to be implemented in response to this event will be to form a group consisting of instrument technicians, a human performance training specialist, and radiation protection personnel. This group will be tasked with identifying factors that present challenges to the SDV surveillance test performance. Specifically, the task group will address environmental, human factors, and test methodology aspects.

## Assessment of Safety Consequences:

There were no safety consequences associated with this event because redundant instruments were capable of performing the safety function of Reactor Protection System actuation if an actual SDV high water level condition had occurred during the time the level instrument was out of service.

## Previous Similar Events:

There are no previous similar events that involve the same underlying cause. This event is not considered a generic or recurring problem.