

# **ENERGY NORTHWEST**

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

September 5, 2003  
GO2-03-143

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. 2003-008-00**

Dear Sir or Madam:

Transmitted herewith is Licensee Event Report No. 2003-008-00 for the Columbia Generating Station. This report is submitted pursuant to 10 CFR 50.73(a)(2)(v)(D). The enclosed report discusses items of reportability and corrective actions taken.

If you have any questions or require additional information, please contact Ms. CL Perino at (509) 377-2075.

Respectfully,



RL Webring  
Vice President, Nuclear Generation  
Mail Drop PE04

Enclosure: Licensee Event Report 2003-008-00

cc: TP Gwynn - NRC RIV  
BJ Benney - NRC-NRR  
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IE22

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**LICENSEE EVENT REPORT (LER)**

(See reverse for required number of  
digits/characters for each block)

**FACILITY NAME (1)**

Columbia Generating Station

**DOCKET NUMBER (2)**

05000397

**PAGE (3)**

1 OF 4

**TITLE (4)**

Reactor Core Isolation Cooling Isolation due to Inadvertent Closure of Containment Isolation Valve During Testing

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
7	8	2003	2003	008	0	9	5	2003	FACILITY NAME	DOCKET NUMBER
<b>OPERATING MODE (9)</b>		1	<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)</b>							
<b>POWER LEVEL (10)</b>		73	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)		X	50.73(a)(2)(v)(D)	
			20.2203(a)(2)(v)			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)(vii)(B)	

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

Craig Sly

**TELEPHONE NUMBER (Include Area Code)**

509-377-8616

**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

**SUPPLEMENTAL REPORT EXPECTED (14)****EXPECTED  
SUBMISSION  
DATE (15)****MONTH****DAY****YEAR**

YES (If yes, complete EXPECTED SUBMISSION DATE).

X

NO

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

On July 8, 2003, Columbia Generating Station (Columbia) was in Mode 1 with the reactor operating at approximately 73 percent of rated thermal power. At 1008 PDT, Reactor Core Isolation Cooling (RCIC) was declared inoperable after one of its steam supply containment isolation valves (RCIC-V-63) was inadvertently closed during the performance of a surveillance test. The surveillance test was discontinued and plant operators verified that the High Pressure Core Spray System was operable as required by Technical Specifications. The RCIC system was restored to its normal standby lineup and declared operable within one hour.

The cause of this event was a personnel error by an I&C technician who was involved in performing a channel functional test at a differential pressure indicating switch (RCIC-DPIS-13B) which senses steam flow to the RCIC turbine. The technician inadvertently applied pressure from a nitrogen bottle to the high pressure side of RCIC-DPIS-13B causing an upscale condition which closed RCIC-V-63 before it was deactivated in accordance with the test procedure.

The technicians involved in this event have been coached concerning human performance and the proper use of self-checking and peer-checking techniques. This incident was referenced as a recent example of a human performance error in human performance timeouts with maintenance teams. The I&C Training Advisory Group will review this issue to determine how it should be included in future training.

# LICENSEE EVENT REPORT (LER)

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

## Event Description

On July 8, 2003, Columbia Generating Station (Columbia) was in Mode 1 with the reactor operating at approximately 73 percent of rated thermal power. At approximately 1008 PDT, the Reactor Core Isolation Cooling System (RCIC) steam supply line outboard isolation valve, RCIC-V-63, closed. This caused RCIC to become inoperable.

The closure of RCIC-V-63 occurred while performing surveillance procedure ISP-RCIC-Q903, "RCIC Isolation on RCIC Steam Flow High Div 2 - CFT/CC" [Channel Functional Test/Channel Calibration]. Surveillance procedure ISP-RCIC-Q903 provides instructions for the channel functional test and channel calibration of the division 2 RCIC steam line flow high instrument channel.

Two technicians were setting up to perform a channel functional test of differential pressure indicating switch RCIC-DPIS-13B. RCIC-DPIS-13B senses steam flow in the steam supply piping to the RCIC turbine. If the differential pressure to the switch is above the switch setpoint, the steam line high differential pressure annunciator will activate in the control room and RCIC-V-63 will close.

The surveillance test procedure calls for isolating RCIC-DPIS-13B, connecting water pots to its test valves, and connecting a low pressure source (in this case nitrogen) and test gauge to the high pressure side water pot. Once the low pressure source is connected to the high pressure side water pot, the procedure calls for opening the breaker to RCIC-V-63 so it will not close when RCIC-DPIS-13B is actuated during the test. The procedure calls for raising input (nitrogen) pressure after the breaker for RCIC-V-63 is open.

The low pressure source used to conduct the test was set up using a nitrogen bottle, high pressure air regulator, low pressure air regulator, test gauge and hoses. The high pressure regulator was used to lower the pressure of the nitrogen bottle to a usable range for the low pressure regulator. The low pressure regulator provided pressure directly to the water pot on the high pressure side of RCIC-DPIS-13B.

While the technician located at RCIC-DPIS-13B was waiting for Operations personnel to open the breaker to RCIC-V-63, he proceeded to pressurize the test set-up. He opened the valve on the nitrogen bottle which feeds the high pressure regulator. The high pressure regulator was closed which prevented pressure from being applied to the low pressure regulator. The technician then adjusted the high pressure air regulator but failed to verify that the low pressure regulator was closed. The low pressure regulator was not closed, allowing uncontrolled pressure to be applied to the high pressure side of RCIC-DPIS-13B. RCIC-DPIS-13B went upscale and actuated RCIC-V-63, causing it to close.

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**Cause of Event**

The cause of this event was a personnel error by one of the I&C technicians performing the surveillance test. The technician who opened the high pressure regulator failed to use proper self-checking techniques to ensure that the pressure regulators were closed prior to introducing nitrogen pressure into them. This allowed an uncontrolled pressure to be introduced to the high pressure side of RCIC-DPIS-13B, causing it to go upscale and isolate RCIC-V-63.

**Safety Significance**

The RCIC system is designed to operate either manually or automatically following reactor pressure vessel isolation accompanied by a loss of coolant flow from the feedwater system to provide adequate core cooling and control of RPV water level. Under these conditions, the High Pressure Core Spray (HPCS) and RCIC systems perform similar functions. After the loss of RCIC, control room operators entered Technical Specification (TS) Action 3.5.3.A, which requires that with the RCIC inoperable, verify by administrative means that HPCS is operable and restore the RCIC system to operable status within 14 days. Since HPCS was verified to be operable and the total duration of this event was approximately one hour, the TS requirements were satisfied. Therefore, it is concluded that this event posed no threat to the health and safety of the public or plant personnel.

This event is reportable under 10 CFR 50.73 (a)(2)(v)(D).

**Immediate Corrective Actions**

Control room operators entered and complied with TS Action Statement 3.5.3.A, by verifying that HPCS was operable. Operators then proceeded to take action to protect HPCS. The Control Room Supervisor stopped performance of ISP-RCIC-Q903, and instructed the I&C technicians to back-out of the surveillance procedure and restore all components to their normal line-up. After all components were restored to their normal line-up, RCIC was placed in a normal line-up with RCIC-V-63 open and declared operable at 1100 PDT.

**Further Corrective Actions**

The technicians involved in this event have been coached concerning human performance and the proper use of self-checking and peer-checking techniques.

A management timeout on human performance errors has been conducted with maintenance teams. This incident was used as one of the examples in the human performance timeout.

The I&C Training Advisory Group will review this issue to determine how it should be included in future training.

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**Previous Similar Events**

A search of the Columbia Problem Evaluation Request (PER) database and LER database was conducted. The search covered the period from 1999 to the date of this event and identified no events involving an RCIC isolation due to personnel error.

**EIIS Information**

Text Reference	System	Component
Reactor Core Isolation Cooling System	BN	
High Pressure Core Spray System	BG	
RCIC-DPIS-13B	BN	PDIS
RCIC-V-63	BN	ISV