



W. Grover Hettel
Columbia Generating Station
P.O. Box 968, PE23
Richland, WA 99352-0968
Ph. 509.377.8311 | F. 509.377.4150
wghettel@energy-northwest.com

February 15, 2017
GO2-17-051

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. 2016-004-00

Dear Sir or Madam:

Transmitted herewith is Licensee Event Report No. 2016-004-00 for Columbia Generating Station. This report is submitted pursuant to 10 CFR 50.73(a)(2)(iv)(A).

There are no commitments being made to the NRC by this letter. If you have any questions or require additional information, please contact Ms. D.M. Wolfgramm, Regulatory Compliance Supervisor, at (509) 377-4792.

Executed on February 15, 2017
Respectfully,

W. G. Hettel
Vice President, Operations

Enclosure: Licensee Event Report 2016-004-00

cc: NRC Region IV Administrator
NRC NRR Project Manager
NRC Senior Resident Inspector/988C
CD Sonoda – BPA/1399
WA Horin – Winston & Strawn

NRC FORM 366 (06-2016)		U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB: NO. 3150-0104		EXPIRES: 10/31/2018					
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>LICENSEE EVENT REPORT (LER) (See Page 2 for required number of digits/characters for each block)</p> <p>(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)</p> </div> <div style="font-size: small;"> 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 and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollections.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. </div> </div>												
1. FACILITY NAME Columbia Generating Station					2. DOCKET NUMBER 05000 397		3. PAGE 1 OF 3					
4. TITLE Automatic Scram Due to Off-site Load Reject												
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		
12	18	2016	2016	- 004 -	00	02	15	17	FACILITY NAME	DOCKET NUMBER		
										05000		
										05000		
9. OPERATING MODE		11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)										
1		<input type="checkbox"/> 20.2201(b)			<input type="checkbox"/> 20.2203(a)(3)(i)			<input type="checkbox"/> 50.73(a)(2)(ii)(A)			<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
		<input type="checkbox"/> 20.2201(d)			<input type="checkbox"/> 20.2203(a)(3)(ii)			<input type="checkbox"/> 50.73(a)(2)(ii)(B)			<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
		<input type="checkbox"/> 20.2203(a)(1)			<input type="checkbox"/> 20.2203(a)(4)			<input type="checkbox"/> 50.73(a)(2)(iii)			<input type="checkbox"/> 50.73(a)(2)(ix)(A)	
		<input type="checkbox"/> 20.2203(a)(2)(i)			<input type="checkbox"/> 50.36(c)(1)(i)(A)			<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)			<input type="checkbox"/> 50.73(a)(2)(x)	
100		<input type="checkbox"/> 20.2203(a)(2)(ii)			<input type="checkbox"/> 50.36(c)(1)(ii)(A)			<input type="checkbox"/> 50.73(a)(2)(v)(A)			<input type="checkbox"/> 73.71(a)(4)	
		<input type="checkbox"/> 20.2203(a)(2)(iii)			<input type="checkbox"/> 50.36(c)(2)			<input type="checkbox"/> 50.73(a)(2)(v)(B)			<input type="checkbox"/> 73.71(a)(5)	
		<input type="checkbox"/> 20.2203(a)(2)(iv)			<input type="checkbox"/> 50.46(a)(3)(ii)			<input type="checkbox"/> 50.73(a)(2)(v)(C)			<input type="checkbox"/> 73.77(a)(1)	
		<input type="checkbox"/> 20.2203(a)(2)(v)			<input type="checkbox"/> 50.73(a)(2)(i)(A)			<input type="checkbox"/> 50.73(a)(2)(v)(D)			<input type="checkbox"/> 73.77(a)(2)(i)	
		<input type="checkbox"/> 20.2203(a)(2)(vi)			<input type="checkbox"/> 50.73(a)(2)(i)(B)			<input type="checkbox"/> 50.73(a)(2)(vii)			<input type="checkbox"/> 73.77(a)(2)(ii)	
					<input type="checkbox"/> 50.73(a)(2)(i)(C)			<input type="checkbox"/> OTHER Specify in Abstract below or in NRC Form 366A				
12. LICENSEE CONTACT FOR THIS LER												
LICENSEE CONTACT Desiree M. Wolfgramm								TELEPHONE NUMBER (Include Area Code) (509) 377-4792				
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						15. EXPECTED SUBMISSION DATE		MONTH	DAY	YEAR		
<input checked="" type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO								5	31	2017		
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) On December 18, 2016 at 11:24 hours, an automatic scram occurred due to a fault on an off-site transmission network. A reactor scram was automatically initiated by the plant response to the transient. All rods fully inserted, Main Steam Isolation Valves [SB,V] automatically closed due to loss of power to both Reactor Protection System [JC] busses. All safety systems operated as designed. Two Safety Relief Valves [SB,V] were initially cycled automatically, then several manually to maintain Reactor Pressure Vessel [AC] pressure. Reactor water level was maintained with Reactor Core Isolation Cooling [BN], Control Rod Drive [AA] flow, and High Pressure CORE Spray [BG]. The cause analysis for the loss of off-site power is being performed by the entity responsible for the off-site transmission network, Bonneville Power Administration (BPA). BPA took immediate corrective actions to restore the off-site transmission network. The root cause evaluation addressing the plant response is being performed by plant personnel. A supplemental LER will be issued when the cause analyses are completed.												

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

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 and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollections.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. LER NUMBER		
Columbia Generating Station	05000- 397	YEAR	SEQUENTIAL NUMBER	REV NO.
		2016	004	00

NARRATIVE**Plant Conditions**

The plant was operating at 100% power prior to the event. There were no safety related systems out of service prior to the event.

Event Description

On December 18, 2016 at 11:24 hours, an automatic scram occurred due to a fault on an off-site transmission network. A reactor scram was automatically initiated by the plant response to the transient.

All rods fully inserted and Main Steam Isolation Valves [SB,V] automatically closed due to loss of power to both Reactor Protection System (RPS) [JC] busses that occurred during the transient following the scram. All safety systems operated as designed. A full safety system isolation occurred due to the loss of RPS, which isolated Reactor Closed Cooling [CC] flow from containment. This caused Primary Containment (PC) temperature and pressure to increase causing high PC pressure actuations to occur. Two Safety Relief Valves [SB,V] were initially cycled automatically, then several manually to maintain Reactor Pressure Vessel (RPV) [AC] pressure. Reactor water level was restored with Reactor Core Isolation Cooling (RCIC) [BN], Control Rod Drive [AA] flow, and High Pressure Core Spray (HPCS) [BG].

After the initial successful start and injection of RCIC, a plant operator failed to establish the proper line up for re-initiation. This resulted in a trip of RCIC and using HPCS to maintain RPV level.

Per plant procedures after the scram an operator tripped the main turbine (MT) [TA], but failed to trip the main generator (MG) [TB]. This allowed voltage to degrade until power was automatically transferred to the backup power sources. The PC was vented through a Standby Gas Treatment Filter [BH] per plant procedures to lower PC pressure.

Cause

Bonneville Power Administration (BPA) (operator of the off-site transmission network) is performing an evaluation of the off-site transmission network failure. This is estimated to be completed in April 2017.

Plant personnel are performing a Root Cause Evaluation on the station's response to the reactor scram, including failure to trip both the MT and MG, and human performance issues operating RCIC. This evaluation is estimated to be completed by late February.

A supplemental LER will be issued when updates are available.

Corrective Actions

BPA took immediate actions to perform maintenance on the off-site electrical equipment.

Plant operators took immediate actions addressing operator human performance issues regarding RCIC, and MT and MG operations.

Operating Experience and Previous Occurrences

There were no occurrences of a scram due to a loss of off-site power in the last 10 years.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

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 and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by 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. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Columbia Generating Station	05000-	2016	004	00

NARRATIVE**Assessment of Safety Consequences**

This event did not challenge the ability of Columbia Generating Station to safely shutdown, and all plant systems responded as designed. Human performance issues resulted in a trip of RCIC, and an automatic transfer of power supplies to backup power supplies per design. The reactor scram and resulting transient caused a loss of RPS which resulted in a full safety system actuation and a reduction of cooling to the PC. The trip of RCIC was not consequential since HPCS was available, and was used, to maintain RPV level. The power supplies transferred to backup power supplies as designed. The reduction of cooling to the PC did not challenge PC integrity, and was restored by operator action. There were no adverse impacts to those systems due this event. There were no undesired radiological or industrial safety aspects resulting from this event.

Energy Industry Identification System Information

Energy Industry Identification System information codes from IEEE Standards 805-1984 and 803-1983 are represented in brackets as [X] and [XX] throughout the body of the narrative.