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August 12, 2013  
GO2-13-116

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. 2013-005-00**

Dear Sir or Madam:

Transmitted herewith is Licensee Event Report No. 2013-005-00 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 Mr. J. R. Trautvetter, Regulatory Compliance Supervisor, at (509) 377-4337.

Respectfully,

A handwritten signature in dark ink, appearing to read "A. Javorik", followed by the word "For" in a cursive script.

A. L. Javorik  
Vice President, Engineering

Attachment: Licensee Event Report 2013-005-00

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

IE22  
NRR

**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 [infocoll@nrc.gov](mailto:infocoll@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-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**

Columbia Generating Station

**2. DOCKET NUMBER**

05000397

**3. PAGE**

1 OF 3

**4. TITLE**

Momentary loss of 115kV offsite power

**5. EVENT DATE**

MONTH	DAY	YEAR
06	15	2013

**6. LER NUMBER**

YEAR	SEQUENTIAL NUMBER	REV NO.
2013	005	00

**7. REPORT DATE**

MONTH	DAY	YEAR
08	12	2013

**8. OTHER FACILITIES INVOLVED**

FACILITY NAME	DOCKET NUMBER
	05000

**9. OPERATING MODE**

4

**11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)**

- |   |   |  |   |
|---|---|--|---|
| <input type="checkbox"/> 20.2201(b)         | <input type="checkbox"/> 20.2203(a)(3)(i)   | <input type="checkbox"/> 50.73(a)(2)(i)(C)             | <input type="checkbox"/> 50.73(a)(2)(vii)     |
| <input type="checkbox"/> 20.2201(d)         | <input type="checkbox"/> 20.2203(a)(3)(ii)  | <input type="checkbox"/> 50.73(a)(2)(ii)(A)            | <input type="checkbox"/> 50.73(a)(2)(viii)(A) |
| <input type="checkbox"/> 20.2203(a)(1)      | <input type="checkbox"/> 20.2203(a)(4)      | <input type="checkbox"/> 50.73(a)(2)(ii)(B)            | <input type="checkbox"/> 50.73(a)(2)(viii)(B) |
| <input type="checkbox"/> 20.2203(a)(2)(i)   | <input type="checkbox"/> 50.38(c)(1)(i)(A)  | <input type="checkbox"/> 50.73(a)(2)(iii)              | <input type="checkbox"/> 50.73(a)(2)(ix)(A)   |
| <input type="checkbox"/> 20.2203(a)(2)(ii)  | <input type="checkbox"/> 50.38(c)(1)(ii)(A) | <input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A) | <input type="checkbox"/> 50.73(a)(2)(x)       |
| <input type="checkbox"/> 20.2203(a)(2)(iii) | <input type="checkbox"/> 50.38(c)(2)        | <input type="checkbox"/> 50.73(a)(2)(v)(A)             | <input type="checkbox"/> 73.71(a)(4)          |
| <input type="checkbox"/> 20.2203(a)(2)(iv)  | <input type="checkbox"/> 50.48(a)(3)(ii)    | <input type="checkbox"/> 50.73(a)(2)(v)(B)             | <input type="checkbox"/> 73.71(a)(5)          |
| <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)(C)             | <input type="checkbox"/> OTHER                |
| <input type="checkbox"/> 20.2203(a)(2)(vi)  | <input type="checkbox"/> 50.73(a)(2)(i)(B)  | <input type="checkbox"/> 50.73(a)(2)(v)(D)             |   |

Specify in Abstract below  
or in NRC Form 366A**12. LICENSEE CONTACT FOR THIS LER****FACILITY NAME**

Motley Hedges, Principal Licensing Engineer

**TELEPHONE NUMBER (Include Area Code)**

509-377-8277

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	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 6/15/2013 at 1222 PDT Columbia Generating Station was in a refueling outage in Mode 4 when valid Essential Safety Function (ESF) actuation signals of Division 1 and 2 Emergency Diesel Generators were received due to a momentary loss of 115kV (1 of 2) offsite power sources. In addition valid actuation signals of Division 1 and 2 Essential Service Water System pumps were also received due to the start of Division 1 and 2 Emergency Diesel Generators. The 4.16kV Division 1 and 2 critical switchgear buses were de-energized resulting in load shed of several systems and an invalid actuation of containment isolation valves for multiple systems. Power to the 4.16kV critical switchgear was automatically restored by the Emergency Diesel Generators.

Plant systems which had been load shed were returned to operating status. The 4.16kV critical switchgear buses were subsequently realigned to an offsite power source.

The momentary loss of the 115kV offsite power source was due to relays opening and reclosing to clear a line fault associated with a range fire under the transmission line.

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

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**NARRATIVE****PLANT CONDITIONS**

At the time of event, the plant was in a refueling outage in Mode 4 at 0% power with all rods in. In preparation for heating up the reactor to support the Reactor Pressure Vessel hydro surveillance test, shutdown cooling had been secured and Residual Heat Removal (RHR) pump "C" had been started in Suppression Pool mixing. Due to recently performed testing on the 230kV Startup Transformer [XMFR], the 4.16kV Division 1 and 2 critical switchgear buses [BU] were powered from the 115kV offsite power source through the Backup Transformer [XFMR].

**EVENT DESCRIPTION**

On 6/15/2013 at 1222 PDT Columbia Generating Station (Columbia) received valid Essential Safety Function (ESF) [JE] actuation signals of Division 1 and 2 Emergency Diesel Generators [DG] due to a momentary loss of the 115kV offsite power source and valid actuation signals of Division 1 and 2 Essential Service Water System [BI] pumps due to the start of Division 1 and 2 Emergency Diesel Generators. This event is reportable under 10 CFR 50.72(b)(3)(iv)(A) - Event Notification #49120 and 10 CFR 50.73(a)(2)(iv)(A).

On the loss of the 115kV offsite power source, the 4.16kV Division 1 and 2 critical switchgear de-energized. The temporary loss of power to these critical switchgear buses resulted in the following:

- Start of Division 1 and 2 Emergency Diesel Generators re-energizing the 4.16kV Division 1 and 2 critical switchgear buses. The subsequent start of Division 1 and 2 Essential Service Water System pumps.
- Closure of containment isolation valves in the Reactor Water Cleanup System [CE], Equipment Drain System and the Floor Drain System [WK]. This was an invalid isolation and is reportable under 10 CFR 50.73(a)(2)(iv)(A)
- Fuel Pool Cooling [DA] pumps tripped.
- Residual Heat Removal [BO] Pump "C" operating in Suppression Pool mixing mode tripped and the system depressurized.
- Control Rod Drive [AA] pump tripped
- Reactor building [NG] ventilation tripped
- Plant Service Water [KG] pump tripped

Shutdown cooling was not in operation at the time of the loss. Reactor coolant temperature was maintained in the temperature range of 130-170 degrees Fahrenheit. Reactor pressure remained at 0 psig.

**IMMEDIATE CORRECTIVE ACTION**

Division 1 and 2 Emergency Diesel Generators automatically repowered the 4.16kV Division 1 and 2 critical switchgear buses in less than 15 seconds.

Fuel Pool Cooling pump "B" started automatically upon repowering the Division 2 critical switchgear bus.

Division 1 and 2 Essential Service Water pumps started automatically due to the start of Division 1 and 2 Emergency Diesel Generators

Actions were taken to restore the following systems to operating status:

- Control rod drive at 1227
- Plant service water at 1238
- Reactor building ventilation at 1243
- Reactor water cleanup at 1258
- 4.16kV Division 2 critical switchgear bus (transferred to the 230kV startup transformer) at 1259

**LICENSEE EVENT REPORT (LER)  
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**NARRATIVE**

- 4.16kV Division 1 critical switchgear bus (transferred to the 230kV startup transformer) at 1310
- Shutdown cooling at 1343 (due to potential delays in the reactor pressure vessel hydro surveillance)
- Division 1 and 2 Emergency Diesel Generators (returned to standby condition) at 1506
- Residual heat removal system "C" (filled and vented and returned to operable status) at 1554
- 115kV Backup Transformer (returned to operable status) at 1824

**CAUSE**

Bonneville Power Authority (BPA) reported that a line fault was detected in the 115kV line. Protective relays properly reacted to the fault by tripping and reclosing in approximately 1.17 seconds, clearing the line fault. A range fire under the 115kV line is believed to be the cause of the fault.

**FURTHER CORRECTIVE ACTION**

None

**ASSESSMENT OF SAFETY CONSEQUENCES**

All off-site electric transmission systems functioned as designed. An analysis of the response of plant equipment and protective systems concludes all safety related plant equipment and systems operated correctly for this condition. There were no safety system functional failures. There were no adverse effects on the health and safety of the public as a result of this event.

**SIMILAR EVENTS**

There has not been any occurrence of an event or condition in the past three years at Columbia Generating Station involving the actuation of a ESF due to a grid disturbance.

**ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIS) INFORMATION CODES**

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