



**JUN 07 2012**

SERIAL: BSEP 12-0061

10 CFR 50.73

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

Subject: Brunswick Steam Electric Plant, Unit No. 1 and 2  
Renewed Facility Operating License Nos. DPR-71 and DPR-62  
Docket Nos. 50-325 and 50-324  
Licensee Event Report 1-2012-003

Ladies and Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.73, Carolina Power & Light Company, now doing business as Progress Energy Carolinas, Inc., submits the enclosed Licensee Event Report (LER). This report fulfills the requirement for a written report within sixty (60) days of a reportable occurrence.

Please refer any questions regarding this submittal to Mr. Lee Grzeck, Acting Supervisor - Licensing/Regulatory Programs, at (910) 457-2487.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. M. Frisco, Jr.'.

Joseph M. Frisco, Jr.  
Plant General Manager  
Brunswick Steam Electric Plant

MAT/mat

Enclosure:

Licensee Event Report

Handwritten initials in black ink. The top line reads 'JEFF' and the bottom line reads 'WRR'.

cc (with enclosure):

U. S. Nuclear Regulatory Commission, Region II  
ATTN: Mr. Victor M. McCree, Regional Administrator  
245 Peachtree Center Ave. N.E., Suite 1200  
Atlanta, GA 30303-1257

U. S. Nuclear Regulatory Commission  
ATTN: Mr. Philip B. O'Bryan, NRC Senior Resident Inspector  
8470 River Road  
Southport, NC 28461-8869

U. S. Nuclear Regulatory Commission **(Electronic Copy Only)**  
ATTN: Mrs. Farideh E. Saba (Mail Stop OWFN 8G9A)  
11555 Rockville Pike  
Rockville, MD 20852-2738

Chair - North Carolina Utilities Commission  
P.O. Box 29510  
Raleigh, NC 27626-0510

**LICENSEE EVENT REPORT (LER)**

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

<b>1. FACILITY NAME</b> Brunswick Steam Electric Plant (BSEP), Unit 1					<b>2. DOCKET NUMBER</b> 05000325		<b>3. PAGE</b> 1 of 3				
<b>4. TITLE</b> Valid Emergency Diesel Generator Actuation											
<b>5. EVENT DATE</b>			<b>6. LER NUMBER</b>			<b>7. REPORT DATE</b>			<b>8. OTHER FACILITIES INVOLVED</b>		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
04	09	2012		2012 - 003 - 00		06	07	2012	BSEP, Unit 2	05000324	
<b>9. OPERATING MODE</b> 5			<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>								
<b>10. POWER LEVEL</b> 000			<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"/> 50.36(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"/> 50.36(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"/> 50.36(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"/> 50.46(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		
<b>12. LICENSEE CONTACT FOR THIS LER</b>											
FACILITY NAME Mark Turkal, Lead Engineer - Licensing								TELEPHONE NUMBER (Include Area Code) (910) 457-3066			
<b>13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT</b>											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		
<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO							<b>15. EXPECTED SUBMISSION DATE</b>		MONTH	DAY	YEAR
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)											
<p>On April 9, 2012, at 0529 hours Eastern Daylight Time (EDT), electrical power was lost to the 4160 V emergency bus E1. Activities to support performance of procedure 0MST-DG11R, "DG-1 Loading Test," were in progress when technicians connected a recorder to the incorrect terminals of an under-voltage relay on emergency bus E1 and caused the normal supply breakers for emergency bus E1 to open. Emergency Diesel Generator (EDG) 1 automatically started and re-energized emergency bus E1 per plant design.</p> <p>This condition is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in automatic actuation of a system specified in 10 CFR 50.73(a)(2)(iv)(B).</p> <p>The root cause of this event is inadequate use of human performance tools when connecting recorders in preparation for performing 0MST-DG11R. Corrective actions include revising the EDG loading test procedures to provide instructions on labeling cables and to incorporate a method to record cable assignments to respective procedural steps.</p>											

LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Brunswick Steam Electric Plant (BSEP), Unit 1	05000325	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 3
		2012 -- 003 -- 00			

## NARRATIVE

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

Introduction*Initial Conditions*

At the time of the event, Unit 1 was in Mode 5, at 0 percent of rated thermal power (RTP) and Unit 2 was in Mode 1 at approximately 100 percent RTP. Offsite power and the four Emergency Diesel Generators (EDGs) [EK] were operable.

*Reportability Criteria*

This event resulted in the automatic actuation of EDG 1. As such, this event is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in valid actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B). The NRC was initially notified of this event on April 9, 2012 (i.e., Event Number 47817). Due to the shared configuration of the onsite AC Electrical Distribution System [EB], this event is applicable to both Units 1 and 2.

Event Description

On April 9, 2012, activities to support performance of procedure 0MST-DG11R, "DG-1 Loading Test," were in progress. Twelve cables were being routed to connect two recorders to various locations within emergency bus E1 switchgear panels as specified in 0MST-DG11R. If performed properly, Recorder 1 Channel 3 would have been connected at Step 7.1.6.7 and Recorder 2 Channel 3 at Step 7.1.7.6. Post-event investigations determined that Recorder 2 Channel 3 was incorrectly connected during performance of Step 7.1.6.7. Subsequently, at 0529 hours Eastern Daylight Time (EDT), electrical power was lost to the 4160 V emergency bus E1 when Recorder 1 Channel 3 was incorrectly connected to the terminals of an under-voltage relay during performance of Step 7.1.7.6 of 0MST-DG11R. The closed versus open circuitry within Recorder 1 Channel 3 activated the relay and caused the normal supply breakers to emergency bus E1 to open. EDG 1 automatically started and re-energized the E1 bus.

Unit 1 was in Mode 5 and electrical systems were aligned to support testing of emergency bus E1. As a result, no other safety system isolations or actuations occurred. Per design, no Unit 2 isolations or actuations occurred.

Normal power supply was restored to emergency bus E1 and EDG 1 was shutdown at 0701 hours.

Event Cause

The root cause of this event is inadequate use of human performance tools when connecting recorders during performance of 0MST-DG11R. The tools used were generic in nature and should have been more specific in application.

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## NARRATIVE

Event Cause (continued)

Two qualified technicians were performing this activity. The cables that were switched were correctly labeled as "REC 1 CH 3" and "REC 2 CH 3." Both Step 7.1.6.7 and Step 7.1.7.6 were required to be concurrently verified. The technicians failed to positively identify the correct recorder cable ends prior to performing the steps and failed to vocalize and repeat back the cable identification nomenclature to ensure the correct cables had been selected. This rendered the concurrent verification ineffective.

Although properly labeled, the technique employed did not include reference to the specific procedure steps which directed cable installation. As a result, the cables could easily be switched. More effective labeling could have reduced the potential for this event.

Safety Assessment

The safety significance of this event was minimal. EDG 1 started and loaded per design. Unit 1 and 2 equipment functioned per design. There was no interruption of Unit 1 shutdown cooling as a result of this event. Per design, no Unit 2 isolations or actuations occurred.

Corrective Actions

The following corrective actions were completed.

- The two technicians were coached and counseled on the importance of using human performance tools in the performance of their duties. The appropriate personnel accountability measures were taken.
- A site-wide stand down was conducted to re-focus personnel on the importance of using verification tools properly so tasks would be completed right the first time.

The following corrective actions to prevent recurrence are planned.

- EDG loading test procedures (i.e., 0MST-DG11R, 0MST-DG12R, 0MST-DG13R, and 0MST-DG14R) will be revised to provide instructions on flagging cables and to incorporate a method to record cable assignments to respective procedural steps. These revisions are currently scheduled to be completed by September 20, 2012.

Previous Similar Events

A review of LERs and corrective action program condition reports for the past three years did not identify any similar previous occurrences.

Commitments

No regulatory commitments are contained in this report.