



Progress Energy

DEC 21 2004

SERIAL: BSEP 04-0165

10 CFR 50.73

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

Subject: Brunswick Steam Electric Plant, Unit No. 2
Docket No. 50-324/License No. DPR-62
Licensee Event Report 2-2004-003

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. 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. Edward T. O'Neil, Manager – Support Services, at (910) 457-3512.

Sincerely,

David H. Hinds
Plant General Manager
Brunswick Steam Electric Plant

SFT/sft

Enclosure:

Licensee Event Report

Progress Energy Carolinas, Inc.
Brunswick Nuclear Plant
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Southport, NC 28461

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cc (with enclosure):

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Ms. Jo A. Sanford
Chair - North Carolina Utilities Commission
P.O. Box 29510
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LICENSEE EVENT REPORT (LER)

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

1. FACILITY NAME Brunswick Steam Electric Plant (BSEP), Unit 2	2. DOCKET NUMBER 05000324	3. PAGE 1 of 4
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4. TITLE
Unanalyzed Condition due to Missing One-Hour Rated Fire Barrier - 480 Volt Switchgear Room

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	29	2004	2004	-- 003 --	00	12	21	2004	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more)									
	20.2201(b)	<input type="checkbox"/>	20.2203(a)(3)(ii)	<input checked="" type="checkbox"/>	50.73(a)(2)(ii)(B)	<input type="checkbox"/>	50.73(a)(2)(ix)(A)	<input type="checkbox"/>		
10. POWER LEVEL 96%	20.2201(d)	<input type="checkbox"/>	20.2203(a)(4)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(x)	<input type="checkbox"/>		
	20.2203(a)(1)	<input type="checkbox"/>	50.36(c)(1)(i)(A)	<input type="checkbox"/>	50.73(a)(2)(iv)(A)	<input type="checkbox"/>	73.71(a)(4)	<input type="checkbox"/>		
	20.2203(a)(2)(i)	<input type="checkbox"/>	50.36(c)(1)(ii)(A)	<input type="checkbox"/>	50.73(a)(2)(v)(A)	<input type="checkbox"/>	73.71(a)(5)	<input type="checkbox"/>		
	20.2203(a)(2)(ii)	<input type="checkbox"/>	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(v)(B)	<input type="checkbox"/>	OTHER Specify in Abstract below or in NRC Form 366A	<input type="checkbox"/>		
	20.2203(a)(2)(iii)	<input type="checkbox"/>	50.46(a)(3)(ii)	<input type="checkbox"/>	50.73(a)(2)(v)(C)	<input type="checkbox"/>				
	20.2203(a)(2)(iv)	<input type="checkbox"/>	50.73(a)(2)(i)(A)	<input type="checkbox"/>	50.73(a)(2)(v)(D)	<input type="checkbox"/>				
	20.2203(a)(2)(v)	<input type="checkbox"/>	50.73(a)(2)(i)(B)	<input type="checkbox"/>	50.73(a)(2)(vii)	<input type="checkbox"/>				
	20.2203(a)(2)(vi)	<input type="checkbox"/>	50.73(a)(2)(i)(C)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	<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)(B)	<input type="checkbox"/>					

12. LICENSEE CONTACT FOR THIS LER	
FACILITY NAME Steven F. Tabor, Lead Engineering Technical Support Specialist	TELEPHONE NUMBER (Include Area Code) (910) 457-2178

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

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

On October 29, 2004, it was determined that two conduits, located in a BSEP Unit 2 480 volt switchgear room, were not properly protected as required by 10 CFR 50 Appendix R, Section III.G.2. The conduits in question contained Division II circuits and were located closer than 20 feet from the Division I switchgear. The cause of this event is attributed to the use of an inadequate plant drawing during the effort to determine plant changes needed to comply with 10 CFR 50 Appendix R requirements. This condition is being reported in accordance with 10 CFR 50.73(a)(2)(ii)(B) as an unanalyzed condition that significantly affected plant safety. Corrective actions include implementation of compensatory measures which remained in place until a one-hour rated fire barrier was installed on the conduits, review of other 480 volt switchgear rooms cable separation configurations, and a verification of the fire area designations for all conduits credited for safe shutdown.

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

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

INTRODUCTION

On October 29, 2004, at approximately 1600 hours, control room operators were informed of two conduits [CND], located in the BSEP Unit 2 480 volt switchgear room E7 [EB], that were not properly protected as required by 10 CFR 50 Appendix R, Section III.G.2. The conduits in question contained Division II circuits and were located closer than 20 feet from the Division I switchgear. Impairments were established and fire watches implemented in accordance with plant procedures. Per the examples in NUREG-1022, Revision 2, "Event Reporting Guidelines 10 CFR 50.72 and 50.73," this condition was determined to be reportable in accordance with 10 CFR 50.72(b)(3)(ii)(B) and 10 CFR 50.73(a)(2)(ii)(B) as an unanalyzed condition that significantly affected plant safety. The required 10 CFR 50.72(b)(3)(ii)(B) notification was made to the NRC on October 29, 2004, at 16:25 Eastern Daylight Time (EDT) (i.e., Event Number 41160).

EVENT DESCRIPTION

Initial Conditions

Unit 2 was in Mode 1, at 96 percent rated thermal power. The fire detection system in the affected area was operable.

Discussion

The E7 switchgear room (i.e., fire area DG-08) is a 1,193 square foot area with a concrete block and steel plate wall to the north, a concrete block wall to the east, reinforced concrete walls to the south and west, and a concrete beam and slab ceiling and floor. A concrete block structure with a metal smoke hood encloses the stairway in the center of the room. The walls, floor, stairway enclosure, and part of the ceiling are three-hour fire rated. Major equipment in the room includes transformers, switchgear, and cable. This switchgear is connected to 4160 volt emergency bus E3 and is one of the emergency power supplies, which supplies several motor control centers in the plant. The area is equipped with detectors, which provide prompt control room notification in the event of a fire. Fire protection for the area consists of manual equipment located in adjacent areas. A 20-foot wide separation zone is provided to separate Division I equipment from Division II equipment. The design calls for exposed cable in this separation zone to be enclosed in a one-hour rated fire barrier to reduce intervening combustibles. The transformers, switchgear, and cables on each side of the separation zone do not contain sufficient combustibles to create a fire exposure to other equipment. Transient combustibles do not create a severe exposure. Manual fire fighting operations should not be difficult, as a severe fire is not postulated, and the hose lines and extinguishers available from surrounding areas are adequate to suppress and extinguish a fire in this area.

The affected conduits run south to north, paralleling the 20-foot wide separation zone but properly remaining outside (i.e., west) of the separation zone. When the conduits reach the north wall, they angle into the separation zone then proceed down through the floor, (i.e., a vertical run in the separation zone by approximately two feet). Approximately 22 feet of conduit within the separation zone was not protected by one-hour rated fire wrap. This conduit configuration resulted in 18 feet of separation from the redundant train.

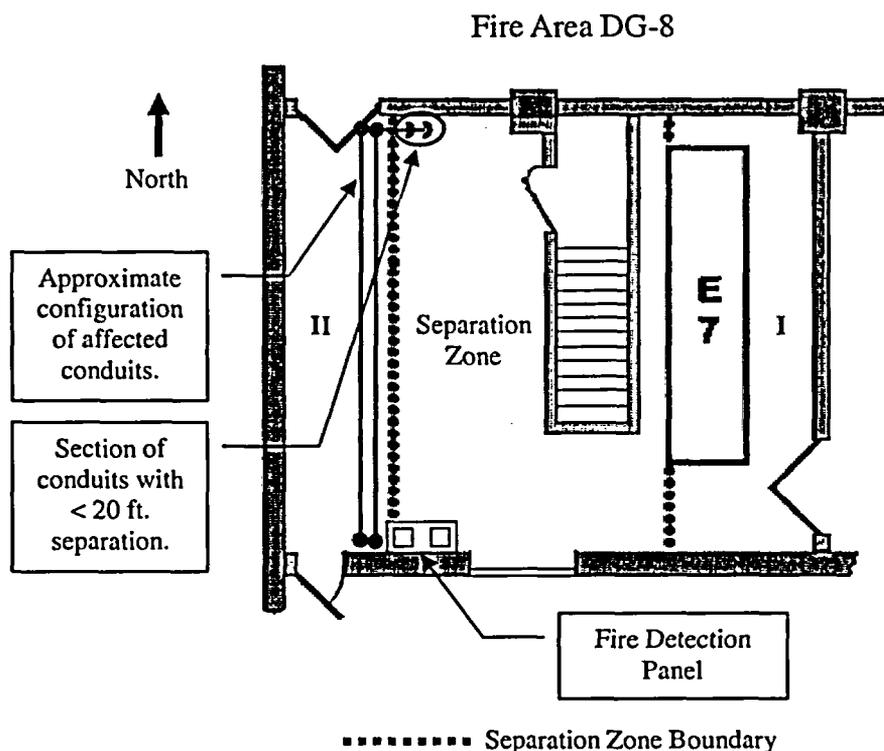
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NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

EVENT DESCRIPTION (continued)

The following diagram provides a simplified representation of fire area DG-08 with the approximate location of the unprotected conduits identified.



EVENT CAUSE

The cause of this event is attributed to the use of a plant drawing that did not accurately reflect the as-built conduit configuration within the fire area DG-08 separation zone. BSEP developed the original Alternative Shutdown Capability Assessment (ASCA) Report in 1983 to support creation of the safe shutdown separation analysis and ensure compliance with 10 CFR 50 Appendix R separation requirements. As prescribed by the ASCA Report, plant computer based conduit and cable raceway schedules were used to identify the physical routings of individual safe shutdown related cables. Plant electrical raceway drawings were then overlaid with fire zone information to identify the safe shutdown cable routes and equipment locations. This information was then combined to produce fire area designations to support the subsequent separation analysis. The fire area DG-08 raceway drawing used during this effort did not correctly reflect the as-built conduit configuration, (i.e., the affected conduits were not identified as traversing into the 20-foot separation zone). Consequently, the actions required to ensure compliance with separation criteria (i.e., the application of cable protection) were not identified for the affected conduits.

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CORRECTIVE ACTIONS

A corrective action to correct the identified drawing deficiency was deemed unnecessary since that drawing was reclassified in 1995 as inactive and cannot be used as a design input. The following corrective actions were established to restore compliance with 10 CFR 50 Appendix R and to ensure other conditions involving inadequate cable protection do not exist.

1. Upon detection of the cable protection deficiency, a one-hour roving fire watch was established and transient combustibles restricted in fire area DG-08 until a one-hour rated fire barrier material could be applied to the affected conduits.
2. On December 7, 2004, a one-hour rated fire barrier material was installed on the affected conduits.
3. A review of the other 480 switchgear room cable separation configurations was performed. This review determined that the identified separation concern is not applicable to those areas.
4. As part of the ongoing Safe Shutdown Revalidation Project a verification of the fire area designation for conduits credited for safe shutdown will be completed by June 15, 2005.

SAFETY ASSESSMENT

The safety significance of this occurrence is considered minimal. The affected area is equipped with fire detectors, which provide prompt control room notification in the event of a fire. Equipment in the area (i.e. transformers, switchgear, and cables) does not contain sufficient combustibles to create a fire exposure to other equipment. Additionally, transient combustibles are limited and do not create a severe exposure. As such, the likelihood of a damaging fire in fire area DG-08 is extremely low. However, should such a fire occur, manual fire fighting operations should not be difficult and the hose lines and extinguishers available from surrounding areas are adequate to suppress and extinguish the fire.

PREVIOUS SIMILAR EVENTS

A review of events occurring within the past three years identified one previous similar occurrence which was reported in LER 2-2002-002, "Remote Shutdown Panel Power Supply Inverter Design Deficiency," dated February 14, 2002. This LER discussed a remote shutdown panel power supply inverter design deficiency which affected safe shutdown capability from outside the Unit 2 control room and was reported as an unanalyzed condition in accordance with 10 CFR 50.72(b)(3)(ii) and 10 CFR 50.73(a)(2)(ii)(B). However, the root cause and corrective actions associated with LER 2-2002-002 could not reasonably be expected to have prevented the condition reported herein.

COMMITMENTS

No regulatory commitments are contained in this report. Those actions discussed in this submittal will be implemented in accordance with corrective action program requirements.