

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

SESSION NBR: 9411220256 DOC. DATE: 94/11/11 NOTARIZED: NO DOCKET #
 FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light C 05000261
 AUTH. NAME AUTHOR AFFILIATION
 HINNANT, C.S. Carolina Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 941004 ltr re violation noted in Insp Rept
 50-261/94-24. Corrective actions: all test document records
 will be assembled into consolidated & readily available
 test package.

DISTRIBUTION CODE: IE01D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6
 TITLE: General (50 Dkt)-Insp Rept/Notice of Violation Response

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD2-1 PD	1 1	MOZAFARI, B	1 1
INTERNAL:	AEOD/DEIB	1 1	AEOD/SPD/RAB	1 1
	AEOD/SPD/RRAB	1 1	AEOD/TTC	1 1
	DEDRO	1 1	<u>FILE CENTER</u> 02	1 1
	NRR/DORS/OEAB	1 1	NRR/DRCH/HHFB	1 1
	NRR/PMAS/IRCB-E	1 1	NUDOCS-ABSTRACT	1 1
	OE DIR	1 1	OGC/HDS3	1 1
	RGN2 FILE 01	1 1		
INTERNAL:	LITCO BRYCE, J H	1 1	NOAC	1 1
	NRC PDR	1 1		

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL
 DESK, ROOM P1-37 (EXT. 504-2083) TO ELIMINATE YOUR NAME FROM
 DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 18 ENCL 18



Carolina Power & Light Company
Robinson Nuclear Plant
PO Box 790
Hartsville SC 29550
Robinson File No.: 13510E
Serial: RNP/94-1877

NOV 11 1994

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
NRC INSPECTION REPORT NO. 50-261/94-24
REPLY TO A NOTICE OF VIOLATION

Gentlemen:

This provides the Carolina Power & Light Company reply to the Notice of Violation identified in NRC Inspection Report 50-261/94-24, which was transmitted by letter dated October 4, 1994. The Notice of Violation involves inadequate testing to demonstrate the one hour capability of the Station Blackout alternate AC power source. The enclosure to this letter also responds to the NRC request for the completion schedule of the upgrade or replacement of submerged cables.

As requested in the letter transmitting the Notice of Violation, the enclosure restates the violation, followed by our reply. By letter dated November 3, 1994, we documented NRC concurrence to submit this response by November 11, 1994.

Should you have any questions regarding this matter, please contact Mr. R. M. Krich at (803) 383-1802.

Very truly yours,

C. S. Hinnant
Vice President

210131

DTG:dtg
Enclosures

c: Mr. S. D. Ebnetter, Regional Administrator, USNRC, Region II
Ms. B. L. Mozafari, USNRC Project Manager, HBRSEP
Mr. W. T. Orders, USNRC Senior Resident Inspector, HBRSEP

9411220256 941111
PDR ADDCK 05000261
Q PDR

Highway 151 and SC 23 Hartsville SC

IEO/11

REPLY TO A NOTICE OF VIOLATION

Violation

10 CFR 50.63, Loss of All Alternating Current Power, requires that the time required for startup and alignment of the alternate AC (AAC) power source and Station Blackout (SBO) equipment be demonstrated by a test. The licensee's Final Safety Analysis Report, Amendment 12, Section 1.8, conformance to NRC Regulatory Guides (RG), states that the licensee will comply with the intent of RG 1.155. Regulatory Guide 1.155, Station Blackout, Appendix A, Section 5, Testing and Test Control, requires that tests to demonstrate conformance to design and readiness requirements be performed in accordance with written test procedures.

Contrary to the above, the licensee's testing performed on December 11, 1992 to demonstrate the time required for startup and alignment of the AAC power source, and documented in a memorandum from D. B. Blakeney to File, date February 1, 1993, was inadequate in that, a) the test activity did not establish the actual SBO configuration of the equipment, and b) the test activity was not accomplished in accordance with written test procedures.

Reply

Carolina Power & Light (CP&L) Company agrees that the test activity, while accomplishing the required objectives, was not conducted in accordance with a specific written test procedure. Accordingly, we consider that the test activity did establish the actual Station Blackout (SBO) configuration of the equipment.

1. The Reason for the Violation

A timed test activity to determine the time needed to start and connect the Dedicated Shutdown Diesel Generator (DSDG) to the Dedicated Shutdown (DS) bus was performed on November 27, 1992. The results of this test showed that this activity could be accomplished within approximately nine minutes. A simulated startup and alignment of the DSDG and SBO equipment, documented in a memorandum dated February 1, 1993, was performed on December 11, 1992, and again on January 30, 1993. This simulated test was conducted in accordance with End Path Procedure (EPP)-22, "Energizing Plant Equipment Using The Dedicated Shutdown Diesel Generator." The simulated and timed walkdown of EPP-22 steps was performed to demonstrate that the SBO loads could be connected to the DS bus within approximately fifty minutes, based on the simulation of nine minutes and forty seconds expended to start and connect the DSDG to the DS bus. The requirement

in 10 CFR 50.63, "Loss of all alternating current [AC] power," is that the DS bus be capable of being energized within one hour from the initiation of the SBO event. Accordingly, these two activities taken together confirmed that the actions required to mitigate an SBO event could be performed within the time and manpower limitations established in our letter responding to the NRC dated March 13, 1991, "Response to NRC Station Blackout Safety Evaluation." However, a specific written test procedure was not developed and implemented that covered these test activities. The cause for this lack of a test procedure was that insufficient management controls were in place at the time this testing was performed to ensure an appropriate level of engineering involvement. Engineering personnel involved in the SBO analysis should have been actively integrated into the testing activity to ensure that a written test procedure was developed.

With respect to testing the actual SBO configuration of equipment, we consider that conformance to design and readiness requirements has been demonstrated. The basis for this conclusion is specifically discussed below.

10 CFR 50.63, paragraph (c)(2) states, in part: "The time required for startup and alignment of the alternate ac power source(s) and this equipment shall be demonstrated by test." This requirement was met through the performance of the following:

- 1) A timed test that started the DSDG and connected the DSDG to the Dedicated Shutdown (DS) Bus,
- 2) Other tests that were previously performed demonstrating connectability of the DS equipment, and
- 3) A simulated, timed walk-through of the applicable Emergency Operating Procedure, i.e., EPP-022, starting from the moment of simulated power loss until all of the emergency loads are connected, which demonstrated that connectability of the loads to the DS bus can be accomplished within one hour.

Regulatory Guide (RG) 1.155, "Station Blackout," reissued August 1988, Section 3.3.5 states, in part: "If an AAC (Alternate AC) power source is selected specifically for satisfying the requirements for station blackout, the design should meet the following criteria:

3. The AAC power source should be available in a timely manner after the onset of station blackout and have provisions to be manually connected to one or all of the redundant safety buses as required. The time required for making this equipment available should not be more than 1 hour as demonstrated by test."

RG 1.155 is explicit in stating that the AAC power source be available within one hour. For H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, our commitment to this provision of the RG, as stated in our letter to the NRC dated March 13, 1991, was met by the test performed on November 27, 1992, by starting the DSDG and connecting it to the DS bus in such a manner that power was available to supply the DS loads.

RG 1.155, Appendix A, "Quality Assurance Guidance For Non-Safety Systems And Equipment," states, in part: "Activities should be implemented from this section as appropriate, depending on whether the equipment is being added (new) or is existing." HBRSEP equipment was not installed to comply with 10 CFR 50.63, but rather to comply with 10 CFR 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979." Therefore, based on the "existing" equipment criteria from RG 1.155, we determined that additional testing to demonstrate that the DSDG could be started and connected to the DS bus was unnecessary beyond the testing performed on November 27, 1992.

CP&L followed industry guidance consistent with the RG 1.155 position regarding AAC availability. Industry implementation guidelines for meeting the provisions of RG 1.155 are contained in NUMARC 87-00, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors," Revision 1, Nuclear Management and Resources Council, Inc., August 1991. RG 1.155 endorses NUMARC 87-00, Revision 0, and the NRC has accepted NUMARC 87-00, Revision 1, by letters from the NRC to NUMARC dated October 7, 1988, June 16, 1989, and January 3, 1990. RG 1.155, Table 1, cross references Section 3.3.5 relative to NUMARC 87-00 sections 2.3.1, 7.1.1, 7.1.2, and Appendices A, B, and C.

NUMARC 87-00, Revision 1, Item B.12 states: "Unless otherwise governed by technical specifications, the AAC system shall be demonstrated by initial test to be capable of powering shutdown equipment within one hour of a station blackout event." Further clarification is provided by Appendix I, Question/Answer, Number 128.

Question 128 answer: "The AAC power source is not required to be permanently connected to the non-safety bus as long as it fulfills all of the Appendix B criteria which includes the capability to be ready to load within one hour." The phrases, "capable of powering shutdown equipment," and "capability to be ready to load," clearly indicate that the NRC position is to start the AAC power source and connect it to the required bus(es) within one hour.

CP&L has met the NUMARC Guideline for an initial test by the following testing.

- 1) The DSDG was installed prior to the SBO rule, therefore, the latest timed performance of Operations Surveillance Test (OST)-910, "Dedicated Shutdown Diesel Generator," dated November 27, 1992, meets the NUMARC guidance for a timed initial test to demonstrate that the DSDG could be started and connected to the DS bus within one hour.
- 2) All loads have been previously loaded to the DS bus via plant modification and routine testing to prove connectability (i.e., Modification 1004, dated October 2, 1990; and, Operations Surveillance Test OST-911, "Dedicated Shutdown Control Station Test, performed on June 2, 1992").
- 3) A timed walkdown of EPP-022 performed on January 30, 1993, which included a walk-through of the steps necessary to start the DSDG and connect to the DS bus, satisfied the CP&L commitments regarding the SBO configuration of equipment.

We responded to the NRC's Safety Evaluation Report dated February 4, 1991, by letter dated March 13, 1991, committing to the NRC that, "CP&L will demonstrate that the Alternate AC (AAC) source can be started and is connectable to the safe shutdown loads within one hour as outlined by NUMARC 87-00, Appendix B, Item 12." The NRC replied in the Supplemental Safety Evaluation (SSE) by letter dated September 16, 1991, which found our response to be acceptable.

Additionally, the NRC has specifically accepted a procedure walk-through as a test for determining AAC availability. Fermi, Unit 2 was a pilot plant for the NRC inspection of the SBO rule implementation. Fermi, Unit 2 utilizes a Combustion Turbine Generator (CTG) as an AAC which connects to a safety bus in the event of a SBO. In the NRC's SSE in response to Fermi, Unit 2, dated April 9, 1992, Section 2.1, a walkdown test was found acceptable as follows.

"Testing has been performed which has demonstrated various aspects of the alternate AC capability. This testing consists of the following:

- 1) Isolate CTG 11 buses and all AC power feeds into CTG 11-1. Black start CTG 11-1 and demonstrate the ability to energize the de-energized output buses. Document the time required to perform these operations. Fermi 2 buses will continue to be supplied by off-site power during this test.
- 2) Perform a timed walkdown (simulation) of the control switch manipulations required to energize safe shutdown loads subsequent to energizing the CTG buses (step 1). This walkdown would be performed at the unit control panels or the simulator as determined appropriate."

Similar to Fermi, Unit 2, on December 12, 1992, an operating shift was utilized to staff the plant simulator during a simulated SBO event to demonstrate the ability to energize the DS bus via the DSDG and load vital plant equipment within sixty minutes in accordance with EPP-022. An actual in-plant walkdown on January 30, 1993, timed the simulated performance of EPP-022. The times associated with simulated performance of starting the DSDG, connecting the DSDG to the DS bus within one hour, and loading all required loads after SBO initiation was documented.

Therefore the testing activities that were performed met the requirements of the SBO rule and our commitments to RG 1.155. However, a specific test procedure was not developed and implemented that governed these testing activities.

2. The Corrective Steps That Have Been Taken and the Results Achieved

Our evaluation of the event has concluded that the required test activity was performed but that a specific written test procedure was not developed and implemented.

All test document records will be assembled into a consolidated and readily available test package.

3. The Corrective Steps That Will Be Taken to Avoid Further Violations

Improved management controls over testing activities which involve Engineering have since been incorporated through the establishment of Plant Program PLP-064, "Engineering Services Request."

4. The Date When Full Compliance Will Be Achieved

The corrective action described regarding test record consolidation above will be achieved by December 14, 1994.

As requested in the Inspection Report cover letter, the scheduled completion for the planned corrective action to upgrade or replace submerged cables, as outlined in Modification M-1165, will be completed by the end of Refueling Outage 16 scheduled to begin the end of April 1995. This upgrade/replacement will encompass those brands of cable that were judged to be not qualified under submerged conditions in the recent tests performed by Sandia Labs. CP&L has sponsored testing to independently demonstrate qualification of the replacement cable in a submerged configuration.