

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8905180254 DOC.DATE: 89/05/08 NOTARIZED: NO DOCKET #
 FACIL:50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light C 05000261
 AUTH.NAME AUTHOR AFFILIATION
 TTER,A.B. Carolina Power & Light Co.
 RECIP.NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Forwards responds to notice of violation initiated by
 Insp Rept 50-261/88-36 & 50-261/88-38.

DISTRIBUTION CODE: IE01D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 5
 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	LO,R	1 1
INTERNAL:	AEOD	1 1	AEOD/DEIIB	1 1
	AEOD/TPAD	1 1	DEDRO	1 1
	NRR SHANKMAN,S	1 1	NRR/DEST DIR	1 1
	NRR/DLPQ/PEB 11	1 1	NRR/DLPQ/QAB 10	1 1
	NRR/DOEA DIR 11	1 1	NRR/DREP/EPB 10	1 1
	NRR/DREP/RPB 10	2 2	NRR/DRIS DIR 9A	1 1
	NRR/PMAS/ILRB12	1 1	NUDOCS-ABSTRACT	1 1
	OE LIEBERMAN,J	1 1	OGC/HDS1	1 1
	REG FILE 02	1 1	RGN2 FILE 01	1 1
INTERNAL:	LPDR	1 1	NRC PDR	1 1
	NSIC	1 1		

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 24 ENCL 24

CP&L

Carolina Power & Light Company

P.O. Box 1551 • Raleigh, N.C. 27602

SERIAL: RNP-89-1406
10CFR50.

MAY 08 1989

A. B CUTTER
Vice President
Nuclear Services Department

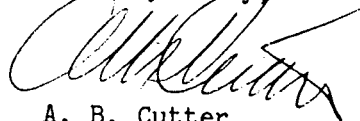
United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
NRC INSPECTION REPORT NO. 50-261/88-36 AND 88-38

Gentlemen:

Carolina Power & Light Company (CP&L) provides this reply to the Notice of Violation initiated by Inspection Report Nos. 50-261/88-36 and 50-261/88-38.

Yours very truly,



A. B. Cutter

ABC/MDM/cn (4092NED)

Enclosure

cc: Mr. S. D. Ebnetter
Mr. L. Garner (NRC - HBR)
Mr. R. Lo

IEO1
11

8905180254 890508
PDR ADOCK 05000261
Q PNU

SEVERITY LEVEL III VIOLATION (RII-88-36-01-SL3)

10 CFR Part 50.46, Appendix K, Section D.1, "Single Failure Criterion," requires an analysis of possible failure modes of ECCS equipment and of their effects on ECCS performance. In carrying out the accident evaluation, the combination of ECCS subsystems assumed to be operative shall be those available after the most damaging single failure of ECCS equipment has taken place.

Contrary to the above, on October 5, 1988, the licensee discovered, through a design basis reconstitution program, that a potential electrical overcurrent condition could exist for safety-related Motor Control Centers 5 and 6 which could result in ECCS equipment being in a degraded condition. This previously unanalyzed condition relates to load flow for the mitigation of a Loss of Coolant Accident (LOCA) without loss of offsite power concurrent with a single failure that will render one of the motor control centers inoperable. This, in turn, could result in overloading and tripping of the remaining motor control center.

REPLY

1. Admission or Denial of the Violation

CP&L acknowledges the violation.

2. Reason for the Violation

The reason for the potential electrical overcurrent condition apparently occurred in the original plant design. The architect/engineer was responsible for the design of the distribution system configuration and had apparently undersized the distribution equipment for MCC-5 and MCC-6.

3. The Corrective Steps Which Have Been Taken and the Results Achieved

On October 5, 1988, information was obtained which indicated that, as a result of preliminary calculations, excessive electrical currents could exist under certain conditions and distribution system alignments for Motor Control Centers MCC-5 and 6, potentially tripping their feeder breakers. The licensee had initiated preliminary calculations related to load flow for the mitigation of a Loss of Coolant Accident (LOCA) without loss of offsite power concurrent with a single failure that will disable one safety-related electrical train (single bus LOCA). This was being performed as part of an ongoing design basis reconstitution program initiated in response to an NRC inspection.

On October 6, compensatory measures were initiated by Special Procedure (SP-820) while the calculation input verification was conducted. The recommended measures included balancing the running Heating, Ventilating, and Air Conditioning (HVAC) loads between MCC-5 and MCC-6 and preventing an automatic start of the standby HVAC loads. In addition, breakers on other nonessential loads were opened to prevent starting. This alignment allowed the plant to maintain full HVAC capability while precluding automatic start of nonessential loads.

On October 7, the NRC was advised of the situation and was provided a status on the checking of the calculations and discussions underway with equipment vendors to evaluate catalog ratings. It was expected that these actions would be complete by October 11. The NRC requested a follow-up conference call.

On October 10, the potential overcurrent condition was confirmed, based on verification of calculation input information reported. The NRC Operations Center was notified in accordance with 10 CFR 50.72.

Although unrelated to the issue at hand, on October 11, a review of preliminary calculations indicated that the ampacity rating of the feeder cable to MCC-6 was too low. It was initially calculated that deratings resulting from the cable tray configuration and the fire retardant cable coating had reduced the cable ampacity below its postulated emergency load. The plant was shut down, and the cable was replaced. Later calculations using more refined input demonstrated that the ampacity was adequate.

During plant shutdown, the following actions were accomplished to ensure the overcurrent concerns related to MCC-5 and MCC-6 were adequately resolved, including those related to the above cable ampacity issue:

- a) MCC-5 and MCC-6 were inspected to ensure no accelerated degradation of the equipment had occurred and found acceptable.
- b) The supply transfer switch to MCC-5 was inspected for indication of prior overcurrent conditions and found acceptable.
- c) Preventive maintenance records were reviewed for evidence of abnormalities with regard to the feeder breakers for the two MCCs and none was found.
- d) The Diesel Generator bus duct ampacity ratings were reviewed to ensure no concerns existed at the current levels predicted for the postulated accident and were found acceptable.
- e) The remaining safety-related power cables were evaluated to ensure no ampacity concerns exist and were found acceptable for continued operation with two exceptions: (1) the circuits to the Diesel Generator auxiliaries, and, (2) the duct heater for the Fuel Handling Exhaust Unit, HVE-15A. However, it was determined that this equipment was not required to be operable on emergency power following a LOCA.

During Refueling Outage No. 12, plant modifications were implemented to refeed the HVE-15A duct heater, the containment fans, and the turbine auxiliary loads from balance of plant MCCs. It was decided that the Control Rod Drive Fans HVH-5A and 5B were to remain connected to MCCs 5 and 6 due to use of these fans during natural circulation cooldown. This could cause the calculated loadings on the MCCs to slightly exceed the 600 amp limit during a design basis LOCA. However, an Engineering Evaluation was performed which verified the acceptability of this condition and justified continued operation until Refueling Outage No. 13. Special

Procedure SP-820 was, however, no longer required. Additionally, it was determined that monitoring of the MCC 5 and 6 loadings should be performed during the next fuel cycle to further check the accuracy of the load calculations, and on February 2, 1989, monitoring of the MCCs was initiated. The results of the monitoring to date have supported the validity of the load calculations.

4. The Corrective Steps Which Will Be Taken To Avoid Further Violation

The ongoing design basis reconstitution program will continue to ensure that the load flow calculations, using the revised load factors, do not invalidate previous evaluations, such as degraded voltage, breaker coordination and interrupt capacity, and vital bus loading studies. This action will assure systematic identification and resolution of any future concerns. In addition, monitoring of the MCCs will continue to ensure the design calculations remain valid.

5. The Date Which Full Compliance Will Be Achieved

Full compliance was achieved during Refueling Outage No. 12, although additional work to close the JCO related to Control Rod Drive Fans HVH-5A and 5B is currently planned to be performed during Refueling Outage No. 13.

SEVERITY LEVEL IV VIOLATION (RII-88-38-01-SL4)

Technical Specification 6.5.1.1.1.a requires written procedures be established for procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Item 9.A of Appendix A requires maintenance that can affect the performance of safety-related equipment be performed in accordance with written procedures appropriate to the circumstances. Pressure testing of the turbine generator is a maintenance activity which can affect the performance of safety-related equipment by using air systems which also supply safety-related equipment.

Contrary to the above, procedures appropriate to the circumstances were not established for maintenance activities on January 6, 1989, in that no written procedures were established to perform pressure testing of the turbine generator. This resulted in the introduction of flammable hydrogen gas mixtures into portions of the station air systems which supply air to safety-related equipment.

REPLY

1. Admission or Denial of the Violation

CP&L acknowledges the violation.

2. Reason for the Violation

The Main Generator is not a safety-related system. The air test, which included a majority of the Hydrogen System, including the Main Generator Hydrogen Regulator, was being performed at cold shutdown condition. This

evolution is a common practice at H. B. Robinson and is recommended by the turbine generator supplier to ensure that the Hydrogen System is leak tight following maintenance. A formal procedure was not used for the air test since previous air tests of the Main Generator had been performed successfully without a procedure. Traveling Maintenance personnel performing the test did not recognize the hazards involved and the potential consequences to personnel and plant equipment. Additionally, there was a lack of sensitivity with regard to the interfacing of nonsafety-related systems with safety-related systems through the instrument air system.

3. Corrective Steps Which Have Been Taken and the Results Achieved

Site Management has discussed this event with Traveling Maintenance Management, stressing the potential significance of the event and the apparent lack of management controls involved. Due to the prompt notification to the industry through the INPO Nuclear Network System, a Significant Event Report has been published by INPO.

The Operating Procedure for the Main Generator has been amended to control the evolution of pressurizing the Main Generator with air. This procedure includes provisions to prevent hydrogen from being able to enter the air systems from this test regardless of the bulk H₂ system line-up. The procedure contains sufficient cautions and detail to ensure that personnel performing the test have a full understanding of potential hazards. The Operating Procedure has been revised to require the Shift Foreman to take a clearance on the hydrogen supply to Unit #2 at the gas shed prior to performing future air tests.

The Clearance Procedure has been modified to specifically set the bounds on what actions can be taken within a clearance boundary and to delineate how fluid or power will be restored to a system and to specify that those functions can only be done by Operations personnel.

4. Corrective Steps Which Will Be Taken To Avoid Further Violations

The revised Clearance procedure policy will be covered in General Employee Training for all individuals who are given unescorted access to the Protected Area. This will assure the necessary controls are established regarding maintenance and construction activities on plant systems and equipment.

5. Date When Full Compliance Will Be Achieved

Full compliance will be achieved prior to the next Refueling Outage.