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SUBJECT: Responds to NRC 930702 ltr re violations noted in insp rept
 50-400/93-12. Corrective actions: turned operable breaker off.

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Carolina Power & Light Company

HARRIS NUCLEAR PLANT
P. O. Box 165
New Hill, North Carolina 27562

JUL 3 0 1993

Letter Number: HO-930127

NRC-829

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United States Nuclear Regulatory Commission
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400
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REPLY TO A NOTICE OF VIOLATION

Gentlemen:

In reference to your letter of July 2, 1993, referring to NRC Inspection Report RII: 50-400/93-12, the attached is Carolina Power and Light Company's reply to the violations identified in Enclosure 1.

It is considered that the corrective actions taken/planned are satisfactory for resolution of the violations.

Thank you for your consideration in this matter.

Very truly yours,

W. R. Robinson
General Manager
Harris Nuclear Plant

MGW:dmw

Attachment

cc: Mr. S. D. Ebnetter (NRC-RII)
Mr. N. B. Le (NRC-NRR)
Mr. J. E. Tedrow (NRC-SHNPP)

MEM/HO-930127/1/OS1

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REPLY TO A NOTICE OF VIOLATION
NRC INSPECTION REPORT NO. 50-400/93-12

VIOLATION 400/93-12-01

Reported Violation:

Technical Specification 3.8.4.1 requires that each containment penetration conductor overcurrent protective device specified in procedure PLP-106, Technical Specification Equipment List Program and Core Operating Limits Report, shall be operable.

Procedure PLP-106, Attachment 6, Containment Penetration Conductor Overcurrent Protective Devices, lists two 15 ampere circuit breakers for primary and secondary protection for the integrated reactor vessel head cable bridge hoist.

Contrary to the above, as of May 25, 1993, the containment electrical penetration for the integrated reactor vessel head cable bridge hoist was provided with only one 15 ampere circuit breaker for overcurrent protection.

This is a Severity Level IV violation (Supplement I).

Denial or Admission:

The violation is admitted.

Reason for the Violation:

The electrical supply for the Reactor Head Cable Bridge Hoist has two 15 ampere breakers wired in series outside containment that satisfy the requirement for a primary and secondary overcurrent protective device. On May 25, 1993, during an independent review it was discovered that the secondary breaker in this supply line was not wired properly and that the breaker would not have been able to perform its overcurrent protective function. The reason for this violation was determined to be an oversight at the time of initial breaker installation during plant construction. This is based on a review performed which revealed no repair or modification activities that could have caused or contributed to this condition.

Corrective Steps Taken and Results Achieved:

The immediate corrective action was to secure power to the bridge hoist by turning the operable breaker off. This step ensured that no current would pass through the containment penetration until the secondary breaker was properly wired. On June 18, 1993 both the primary and secondary breakers were satisfactorily tested for the instantaneous and time delay trip functions. The wiring problem on the secondary breaker was corrected in accordance with design drawings on June 21, 1993.

Corrective Steps Taken to Prevent Further Violations:

An investigation was conducted to determine if similar conditions exist with other 480 volt breakers that serve as overcurrent protective devices for containment penetrations. No additional discrepancies were identified. Additional evaluation/investigation is in progress for the 6.9 KV and 120/208 volt containment penetration breakers. This action will to be completed by August 31, 1993.

Date When Full Compliance Will Be Achieved:

Full compliance was achieved on June 21, 1993, upon correcting the wiring problem on the secondary breaker. The additional evaluation/investigation of other containment penetration breakers will be completed by August 31, 1993.

REPLY TO A NOTICE OF VIOLATION
NRC INSPECTION REPORT NO. 50-400/93-12

VIOLATION 400/93-12-02

Reported Violation:

Technical Specification 6.8.1.a requires that written procedures be established and implemented covering procedures outlined in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978.

Regulatory Guide 1.33, Appendix A, paragraphs 3.s.2.(b) and 8 require operating procedures for the onsite AC electrical distribution system and for surveillance testing.

Operating Procedure OP-156.02, AC Electrical Distribution, Section 5.13.2, contains directions for placing 6.9 kilovolt electrical circuit breakers into service and contains a note to ensure that the mechanism operated cell aligns with the corresponding fork on the breaker mechanism as the breaker is racked into place.

Operations Surveillance Test Procedure OST-1119, Containment Spray Operability Train B, Section 7.3, Step 48, directs operators to turn off and lock the breaker to valve 1CT-95 during restoration of the system following testing.

Contrary to the above,

1. On May 23, 1993, procedure OP-156.02 was found to be improperly implemented in that the fork on breaker 122 was not aligned with the mechanism operated cell. This condition contributed to an inadvertent deenergization of the 1B-SB emergency bus and resultant emergency diesel generator actuation.
2. On June 2, 1993, while performing procedure OST-1119, plant personnel turned off but did not lock the breaker to valve 1CT-95 as required. Furthermore, procedure steps had been initialed by both the operator and an independent verifier that the breaker was locked off.

This is a Severity Level IV violation (Supplement I).

Denial or Admission:

The violation is admitted.

Reason for the Violation:

Example 1

The improper alignment of the mechanism operated cell (MOC) for breaker 122 was due to the lack of knowledge on the part of operators regarding the proper method for checking MOC alignment during breaker rack-in and inadequate maintenance procedures resulting in improper installation and position verification of the MOC switch and actuating angle.

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Example 2

The failure to lock the breaker for valve 1CT-95 was due to a lack of self checking and improper independent verification. The auxiliary operator that turned the breaker off did so under the direction of a control operator located in the control room. The control operator failed to read the entire applicable procedure step and therefore missed recognizing that the breaker should be locked. The auxiliary operator was not the same individual who had turned the breaker on earlier in the procedure, and there was no local indication on the breaker that a lock was required. When the auxiliary operator returned to the control room to initial the procedure, he also failed to read the entire procedure step and missed the locking requirement. The control operator verified the step by the absence of illuminated indicating lights on the control switch, which is not in accordance with PLP-702, Independent Verification, Section 5.3 which requires a local verification of the breaker.

Corrective Steps Taken and Results Achieved:

Example 1

Inspection of the subject MOC switch assembly revealed damage due to the mispositioning and subsequent switch operation. The MOC actuator was replaced on May 24, 1993.

Example 2

The failure to lock the breaker in the OFF position was identified and corrected by the next shift on June 3, 1993, while performing another test procedure (OST-1045) which also requires operation of the breaker for 1CT-95.

Corrective Steps Taken to Prevent Further Violations:

Example 1

An inspection of other 6.9 KV breakers was performed to ensure proper MOC switch alignment. No other discrepancies were identified.

Training was provided to appropriate operations personnel on the proper methods to verify MOC switch alignment during 6.9 KV breaker rack-in evolutions. This was completed on June 29, 1993.

Maintenance procedures will be developed and revised as necessary to include inspection of MOC switch and actuating angle condition and alignment. A placard will be installed inside the 6.9 KV breakers to indicate the location for conducting MOC alignment verification. These actions will be completed by October 1, 1993.

Example 2

The auxiliary operator and control operator involved in this incident were counseled on the importance of self checking and independent verification. The importance of self checking as highlighted by this incident and the requirements for local verification of breaker positions in accordance with PLP-702 will be presented to both Operations and Radwaste personnel. This action will be completed by August 30, 1993.

Date When Full Compliance Will Be Achieved:

Example 1

Full compliance was achieved on May 24, 1993 upon replacement of the damaged MOC actuator. The corrective steps to prevent further violations will be completed by October 1, 1993.

Example 2

Full compliance was achieved on June 3, 1993 upon identification of the error and locking the breaker as required. The corrective steps to prevent further violations will be completed by August 30, 1993.

REPLY TO A NOTICE OF VIOLATION
NRC INSPECTION REPORT NO. 50-400/93-12

VIOLATION 400/93-12-03

Reported Violation:

10 CFR Part 50, Appendix B, Criterion III requires, in part, that measures be established to assure that regulatory requirements and design bases are correctly translated into design documents. Also, design control measures shall provide for verifying or checking the adequacy of design.

The licensee's Corporate Quality Assurance Manual, Section 3.0, sets forth minimum requirements for control of design activities affecting systems, components, and structures. It requires that sufficient design verification shall be performed to substantiate that the final design documents meet the appropriate design inputs. It further requires that a design verification of the completed design package shall be performed to verify that the design is technically adequate with respect to the design basis.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents, and an adequate verification was not performed to verify that designs were technically adequate with respect to the design bases for pipe stress analysis calculation 71-1, Auxiliary Feedwater (AFW) Piping From Floor (Elevation 261') to Steam Generator Auxiliary Feed Pumps, Discharge Nozzles, and Anchor Point 4803 at Wall" originated in 1974. Specifically, the pipe stress analysis did not correctly model the centers of gravity for two motor-operated valves in the seismic class I auxiliary feedwater system. This rendered the associated recirculation piping for the "A" and "B" motor driven auxiliary feedwater pumps, being outside of its design seismic basis since initial construction.

This is a Severity Level IV violation (Supplement I).

Denial or Admission:

The violation is admitted.

Reason for the Violation:

Qualification of the piping containing valves 3AF-V187SA-1 and 3AF-V188SA-1 was performed by Ebasco Services, Inc. which was the Architectural Engineer for the Harris Nuclear Plant. Ebasco maintained calculation 71-1 until it was turned over to CP&L during 1986 in support of NRC IEB 79-14 Program implementation. The calculation received by CP&L incorrectly modeled the weight of the composite valve assembly (valve body and valve motor operator) at the center of gravity of the valve bodies. CP&L performed a review of the calculation in accordance with the requirements of the Harris NRC IEB 79-14 program. This review verified valve location, valve tag number and valve orientation, but since verification of center of gravity location of valve assemblies was not required by this review the modeling error was not detected.



Corrective Steps Taken and Results Achieved:

Upon identification of this condition an engineering evaluation was performed which verified the civil/structural operability of the piping and pipe supports associated with the lines containing motor operated valves 3AF-V1875A-1 and 3AF-V188SA-1. A plant modification (PCR6925) has been approved which will remove the motor operators from the subject valves. This modification will be implemented during the next Harris Refueling Outage.

Corrective Steps Taken to Prevent Further Violations:

A review of selected similar valves and their modeling technique for pipe stress analysis has been completed. The review resulted in no additional examples of improper modeling of the center of gravity for similar valves with motor operators. The current CP&L Nuclear Engineering Design Guide (DG II.8) for Pipe Stress Analysis provides explicit methodologies for modeling valves which would prevent a similar recurrence. The modeling error is considered to be an isolated incident.

Date When Full Compliance Will Be Achieved:

Full compliance was achieved on June 29, 1993, upon completing the engineering evaluation verifying the civil/structural operability of the subject auxiliary feedwater lines. Removal of the motor operators from the subject valves will be completed by May 15, 1994.