UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FEBRUARY 27 1979

~~NRC PDR~~
TERA

Docket Nos. 50-325
and 50-324

Mr. J. A. Jones
Executive Vice President
Carolina Power & Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

Dear Mr. Jones:

The staff is in the process of reviewing additional information supplied in connection with the incomplete items identified in Table 3.1 of the NRC's Fire Protection Safety Evaluation Report (SER) which accompanied Amendment No. 11 to Facility Operating License No. DPR-71 for Unit No. 1 and Amendment No. 37 to Facility Operating License No. DPR-62 for Unit No. 2 of the Brunswick Steam Electric Plant, issued November 22, 1977. As noted in paragraph 3.2 of the SER, the staff is preparing a supplement to address the resolution of these incomplete items. To aid us in the completion of this supplement, we find that we need additional information. Answers to the questions in the attachment to this letter will supply the necessary information.

Your attention is directed to questions 3, 10, 12, and 15 which concern modifications that we understand are being implemented on a schedule consistent with completion of the modifications identified in Section 3.1 of the SER. If our understanding is correct, these particular questions will need to be resolved prior to return to power operation following the BSEP 1979 refueling outages. Our staff has requested a minimum 3-week lead time to properly assess your responses to these four questions.

For your information, the NRC's target date for completion of all modifications related to fire protection is October, 1980. You should verify that your overall schedule is consistent with this date.

Sincerely,

T. Ippolito

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

7903220382

Enclosure:
Fire Protection Program Safe
Shutdown Analysis Questions

cc: Richard E. Jones, Esquire
Carolina Power & Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

George F. Trowbridge, Esquire
Shaw, Pittman, Potts & Trowbridge
1800 M Street, NW
Washington, D. C. 20036

John J. Burney, Jr., Esquire
Burney, Burney, Sperry & Barefoot
110 North Fifth Avenue
Wilmington, North Carolina 28401

Southport - Brunswick County Library
109 W. Moore Street
Southport, North Carolina 28461

BRUNSWICK 1 & 2
FIRE PROTECTION PROGRAM REVIEW
SAFE SHUTDOWN ANALYSIS
50-324, 325

1. Verify that cable trays, including non-safety related trays, and stored combustibles were considered in the safe shutdown analysis as "outside sources of combustion." (II.D.1:a and b)

2. Describe what situations were considered "close proximity" and were analyzed in the cable study. (II.D.1:C)

3. For this item and others where the proposed modification is to install a fuse in the circuit, provide schematics, or a representative schematic, that shows how the fuse will remove the ground but still allow operation of the required equipment. (II.D.2:3,33; II.D.3: 3,4,38)

4. For these items and several others, the proposed modification is installation of a 3-hour fire barrier. Provide details on the construction of these barriers. (II.D.2: 8,64,66,67; II.D.3: 9,66, 68, 69)

5. The proposed modification for numerous areas is to provide a sprinkler head in the area of the crossing or where redundant cables are in proximity to protect the redundant safe shutdown cabling in the area. However, a sprinkler head may be delayed in actuating and allow damage to redundant equipment prior to the head opening. Additionally, if the sprinkler system fails to operate, the fire brigade may not respond soon enough to preclude loss of redundant cabling. To provide adequate protection, in addition to the sprinkler head, the following should be provided:

   1. At cable tray crossings where a sprinkler head is to be provided, a fire barrier should be provided between the trays at the cross-over and extending beyond the cross-over. This may be a "Marinite" or "Kao-Wool" type barrier; and

   2. Where conduit crosses or is in proximity to trays and a sprinkler head was to be provided, the conduit should be wrapped with insulation providing at least 1/2 hour rated fire protection. This may be a "Kao-Wool" or calcium-silicate type insulation.

   The installation to be used to provide the above protection should be based on tests to demonstrate the adequacy of the protection.

6. Provide details on the re-routing of the cable for item II.D.2.13. This should be shown on sketches or drawings if in the same fire area as the redundant cable.

7. For these items cable routing drawings appear to show that redundant cables are in close proximity to each other. Provide details to justify the lack of barriers and other protection for these items. (II.D.2: 28, 29; II.D.3: 2, 13, 17, 28, 32, 33, 77)

8. For these items, the description appears to indicate that redundant diesel generators could be lost in a single fire, however, no modifications are proposed. Clarify why no modifications are required to preserve safe shutdown capability. (II.D.2: 78; II.D.3: 83)

9. For item 94 on page II.D.61, the proposed modification is to provide a 3-hour fire barrier. Provide details to show that the barrier will adequately separate trays 37N/CB and 85A/CA where they cross and where they are routed adjacent to each other.

10. For various items in sections III.D.2 and III.D.3, the proposed modification includes installation of isolation switches and some control switches for affected safety circuits. The following information should be provided for these modifications:

    (a) Verify that these new devices will conform to the design criteria (FSAR) that other electrical equipment in these safety circuits were required to meet;

    (b) Provisions for key-locking of the switches;

    (c) Provisions for periodic checks of switch position;

    (d) Schematics to show use of the device in the circuit and identification of location of equipment and wiring (e.g., portions of the circuit located in the cable spreading room);

    (e) Description of steps included in procedures to effect the alternate shutdown method;

    (f) Number of personnel required to perform the alternate shutdown functions; and

    (g) Provisions to periodically test operability of these devices, including technical specifications.

11. The analysis for certain redundancies indicates that safe shutdown will not be affected if certain operator actions are taken. These required actions should be included in appropriate operating or emergency procedures as described in the following:

    (a) For items 13 and 14 in III.D.2 and items 11 and 12 in III.D.3, required operator actions to shed non-critical D.C. battery loads for fires in these areas should be included in procedures;

    (b) For items 33 and 34 in III.D.2 and items 33 and 34 in III.D.3, required operator actions to transfer switchgear control circuits to a different power supply for fires in these areas should be included in procedures;

    (c) For items V.C.1.a(3) and V.C.1.b(3), required operator actions to isolate the service water supply to the reactor building closed cooling water heat exchangers should be included in procedures

where a fire may render inoperable the two diesels within a safety division.

12. For items 58 through 63 of III.D.2 and items 57 through 62 of III.D.3 provide details on the redundant instrument loop and power supply, including the following:

(a) Verify that these new devices will conform to the design criteria (FSAR) that other electrical equipment in these safety circuits were required to meet;

(b) Schematics to show function of these circuits and identification of location of equipment and wiring (e.g., portions of the circuit located in the cable spreading room).

13. Various items in III.D.2 and III.D.3 indicate that a new cable will be provided. Verify that the new cable will be routed independent of the cable spreading room.

14. Items IV.C.1(f) and IV.C.2(e) indicate that 3-hour barriers will be provided for the instrument racks in the Division II RHR rooms for each unit or the racks will be relocated. A tele-con with CP&L personnel indicates that the racks are being relocated. Provide details on the new location of the instrument racks to show that a fire in the Division II RHR rooms will not affect operation of the HPCI pumps for either unit.

15. Items V.C.1a(2) and V.C.1.b(2) indicate that manual transfer switches will be provided to transfer certain Division I motor operated valves to a Division II power supply. The following information pertaining to this modification should be provided:

(a) Details to show that a single failure, such as failure of the manual transfer switch, will not incapacitate Division I and Division II power supplies;

(b) Verify that these new devices will conform to the design criteria (FSAR) that other electrical equipment in these safety circuits were required to meet;

(c) Provisions for key-locking of the switches;

(d) Provisions for periodic checks of switch position; and

(e) Schematics to show use of the device in the circuit and identification of location of equipment and wiring (e.g., portions of the circuit located in the cable spreading room).

MEETING SUMMARY DISTRIBUTION

ORB#4

Mr. Lowell E. Roe
Vice President, Facilities
Development
Toledo Edison Company
Edison Plaza
300 Madison Avenue
Toledo, Ohio 43652

Docket File
NRC PDR
L PDR
ORB#4 Rdg
NRR Rdg
H. Denton
E. G. Case
V. Stello
B. Grimes
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