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FLORIDA POWER & LIGHT COMPANY

November 23, 1983
L-83-571

Mr. James P. O'Reilly
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

Re: St. Lucie Unit 2
Docket Nos. 50-389
Inspection Report 83-57

Florida Power & Light has reviewed the subject inspection report regarding fire protection and prevention.

A response to the findings in Appendix B of the report is attached. Subsequent information will be submitted as identified in the responses. There is no proprietary information in this report. Our response to the findings in Appendix A was provided in our letter L-83-564 dated November 18, 1983.

Very truly yours,

J. A. de Master

J. W. Williams, Jr.
Vice President
Nuclear Energy Department

JWW/PLP/js

Attachment

cc: Harold F. Reis, Esquire
PNS-LI-83-714

ATTACHMENT

Re: St. Lucie Plant Unit 2
Docket No. 50-389
Inspection Report 83-57

Finding A

FSAR Appendix 9.5.a Section 7.E.3.(c) states that the guidelines of NFPA-13 are followed in the design of the automatic sprinkler systems. NFPA-13, Sprinkler Systems, Section 4-1 states that the basic principle for proper sprinkler protection is to provide minimum interference to the discharge pattern from beams, bracing, trusses, piping, lighting fixtures, HVAC ducts and similar obstructions. Clearance between sprinklers and building structural members is required unless tests are performed to demonstrate that no obstructions are provided to the spray discharge.

Contrary to the above, the automatic sprinkler systems provided within the auxiliary building do not meet the intent of NFPA-13 due to excessive obstructions to the sprinkler spray discharge created by cable trays, HVAC ducts, building structural components, etc. which are located between the ceiling level sprinkler nozzles and the floor.

Response:

1) FPL does not concur with the finding.

2) FPL has done a detailed engineering review of the automatic sprinkler systems provided within the auxiliary building to determine if they do in fact meet the intent of NFPA-13. We found that FPL does meet the intent of NFPA-13 because factors such as obstructions were compensated for by the basic overdesign of the sprinkler system. Where in general a sprinkler density of .1 to .2 gpm/sq. ft. is called for, we used a density of .3 gpm/sq. ft. Prior to, during, and after installation concurrence of a group of fire protection specialists was obtained. The group included an Ebasco Fire Protection Engineer, a Nuclear Mutual Limited Fire Protection Engineer (M & M Consultant), our Sprinkler Contractor (Grinnell), and our Corporate Fire Protection Insurance Representative.

Finding B

FSAR Appendix 9.5A Section 7.E.1(a) states that the guidelines of NFPA-72D are utilized in the design of the fire detection system. NFPA-72D and NFPA-72D (1974 Edition), Proprietary Protective Signaling Systems, Section 3331 states that fire detection equipment shall be located on the ceiling or on the side walls near the ceiling and that all portions of the protected area shall be provided with sufficient detection equipment.

Contrary to the above, smoke detection units are not installed at the ceiling level of battery room No. A, boric acid tank room and ECCS pump room and detection units are not provided for all of the pipe tunnel area.

Response

Battery Room A

1. FPL does not concur with the finding.

2. FPL utilized the most recent NFPA code for the fire protection system design in Battery Room A. The addition of detectors in the A battery room was agreed to during the site NRC walkdown. The recent code for NFPA-72D refers to NFPA 72E for specifics on detector design. NFPA-72E for smoke detectors states "The location and spacing of smoke detectors shall result from an evaluation based on engineering judgement supplemented by the guidelines detailed in this standard." Since the only source of combustion in this room is the battery, a detector placed over the battery was determined to provide maximum protection to the battery.

Boric Acid Tank Room

1. FPL does not concur with the finding.

2. The boric acid tank room contains negligible combustibles. Original plant design placed detectors in the room to protect the boric acid tank pumps and valves. Subsequent design has installed a concrete floor between the pump/valve room and the tank room. With this new design there is no equipment to be protected in the boric acid tank room and the detectors are not needed. However, detectors are placed on the ceiling in this fire subzone.

Response

ECCS Pump Room

1. FPL does not concur with the finding.

2. The design of fire detection in the ECCS pump room originated at St. Lucie Unit 1. The NRC letter dated November 24, 1980 listed the open items for St. Lucie Unit 1. Item 3.12.7 requested fire detection for the LPSI, HPSI, and containment spray pumps. FPL letter L-81-48 dated January 11, 1981 stated the FPL response for this open item as follows:

   "Automatic smoke detectors connected to the main fire alarm system in the control room will be provided for the LPSI, HPSI and Containment Spray Pump areas. Early warning detectors (ionization type) are to be installed in close proximity to the pumps to detect fires in the incipient stage. The fire detection design was performed in accordance with plant design criteria and utilizes components and materials similar to the original design. Both A and B zones were brought into the subject areas which will ensure redundant detection in safety-related areas in accordance with the original system design philosophy and FSAR Section 9.5.1."

   This position was accepted by the NRC in a letter dated January 14, 1983. The design criteria for PSL-2 is the same as that which was accepted by the NRC on PSL-1. PSL-1 and PSL-2 are of duplicate design.

Pipe Tunnel Area

1. FPL does not concur with the finding.

2. The section of the NFPA code which deals with location and spacing of detectors, NFPA-72E, reads as follows: "The location and spacing of smoke detectors shall result from an evaluation based on engineering judgement supplemented by the guidelines detailed in this standard." The pipe tunnel area contains negligible combustibles and is in an open area covering two stories of the reactor auxiliary building. Due to the low combustible loading and ventilation flow the existing detectors were judged as adequate for this fire zone.

Finding C

FP&L's Appendix R Fire Protection Submittal of August 14, 1982, indicates which areas of the plant are to be provided with automatic fire detection coverage.

Contrary to the above, automatic fire detection is not provided for the following areas: "A" train DC equipment room (Fire Area D), boric acid pump room (Fire Zone 17 lower) and all of Fire Zone 19. The August 14, 1982 submittal indicated that an automatic fire detection system was to be provided for these areas.

Response

"A" train DC equipment room

1) FPL concurs with the finding.
2) Automatic fire detection equipment was never specified for this area.
3) Engineering is in the process of preparing a change to have the fire protection equipment installed.
4) Engineering has been re-instructed in the Appendix R requirement.
5) Full compliance will be achieved by June 30, 1984.

Boric Acid Pump Room

1) FPL concurs with the finding.
2) Fire dectection was originally specified for this fire zone. However, a plant redesign placed a floor between the pump and tank room, thus blocking off the existing detectors from the pump room. Additional detectors were not specified.
3) Engineering is in the process of preparing a change to have the fire detection equipment installed.
4) Engineering has been reminded of the importance of checking Appendix R changes.
5) Full compliance will be achieved by June 30, 1984.

Fire Zone 19

1) FPL concurs with the finding.
2) Engineering evaluation was performed for Fire Zone 19 and it was determined that the existing fire detection equipment is adequate. A deviation was never submitted.
3) FPL will submit a deviation to Appendix R for coverage of Fire Zone 19.
4) FPL is conducting a re-review of Appendix R commitments and their implementation.
5) An Appendix "R" deviation will be submitted to NRR by December 23, 1983.

Finding D

FP&L's response to FSAR Question No. 280.20 states that in lieu of providing an automatic water extinguishing system for drumming storage area (Fire Zone 29), area smoke detectors would be installed within the room and a three hour rated door would be provided for the entrance doorway.

Contrary to the above, a fire door has not been provided for the entrance doorway into the drumming storage area.

Response

1) FPL concurs with the finding.
2) The Appendix A commitment was overlooked when the Appendix R design was initiated.
3) A fire door will be provided for the entrance to the drumming storage area.
4) Because the finding represents an isolated occurrence no additional corrective steps are required.
5) Full implementation will be achieved by June 30, 1984.

Finding E

FSAR Appendix 9.5A Section 7.E.3.(d) and response to FSAR Question 280.7 state that the interior fire hose systems are designed to the guidelines of NFPA-14.

Contrary to the above, the interior fire hose systems for the reactor and fuel handling buildings do not meet NFPA-14, Standpipe and Hose systems, in that the systems are supplied by the primary water system which is inadequate to meet the minimum volume and pressure requirements of NFPA-14. NFPA-14 Section 54 requires a supply sufficient to maintain a residual pressure of 65P psi at the topmost outlet with 100 gpm flowing.

Response

1) FPL does not concur with the finding.
2) The intent of the response in 280.7 was to state that we comply with NFPA-14 with the exception of the fire hose systems for the reactor and fuel handling buildings. It should be noted that evaluations have been performed to show that the hose stations inside containment are approximately equivalent to NFPA-14 and provides adequate flow and pressure for the nozzles used in containment and the FHB.