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ACCESSION NBR: 8802260198 DOC. DATE: 88/02/22 NOTARIZED: NO DOCKET #
 FACIL: 50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
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 RECIP. NAME RECIPIENT AFFILIATION
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SUBJECT: Responds to 880107 supplemental safety evaluation re
 alternate shutdown capability. Util will add general note in
 procedure to permit restoration of essential equip should
 bus feeder breaker trip due to fire.

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FEBRUARY 22 1988

L-88-89

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: St. Lucie Unit 1
Docket No. 50-335
Alternate Shutdown Capability

By letter dated January 7, 1988 (E. G. Tourigny to C. O. Woody) NRC transmitted the Supplemental Safety Evaluation (SSE) for St. Lucie Unit 1 Alternate Shutdown Capability. The SSE supplemented the original safety evaluation dated July 17, 1984 to address a fire in the Cable Spread Room. The SSE concluded that except for two open items, the Florida Power & Light Company methodology for assuring safe shutdown for a fire in the Control Room or Cable Spread Room conforms to the criteria delineated in Sections III.G.3 and III.L. of 10 CFR 50 Appendix R and Generic Letter 81-12 and 86-10.

As requested by the above letter, attached please find FPL's plans to address the following two open items.

1. The absences of ~~Thot~~ indication on the alternate shutdown panel, and
2. The lack of an analysis of multiple high impedance faults.

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Based on discussions with the NRC Project Manager for St. Lucie Plant and the age of the issue, FPL feels it would be beneficial to meet and discuss the resolution of the open items. The meeting arrangements will be discussed with the NRC Project Manager.

Should you have any additional questions, please contact us.

Very truly yours,


W. F. Conway
Senior Vice President-Nuclear

WFC/GRM/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator,
Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

ATTACHMENT

ST. LUCIE UNIT 1 ALTERNATE SHUTDOWN CAPABILITY
SUPPLEMENTAL SAFETY EVALUATION OPEN ITEMS

Open Item #1: The absence of T_{hot} indication on the alternate shutdown panel.

During the NRC's 1985 special fire protection inspection review of alternate shutdown instrumentation, both I&E and NRR confirmed the use of T_{cold} . NRC letter dated 4/22/85 Transmittal Inspection Report 85-06 which stated:

"EOP 2-0030144, Alternate Shutdown-Instrumentation for monitoring reactor coolant hot leg temperature was not installed at the hot shutdown panel or any other remote station. IE Notice 84-09 identifies this system process variable as being required. The licensee provided information indicating that this issue was discussed with NRR and not having T_{hot} indication was acceptable to the NRC as documented in NRC meeting minutes of May 7, 1982. The licensee formally submitted letter L-82-208 dated May 17, 1982 which describes the analyses (see FSAR Section 15.3 and 15.C.4) that natural circulation maintains a close relationship between reactor coolant hot and cold leg temperatures. Several natural circulation cooldowns on Unit 1 have verified the accuracy of the above results; thus, an operator can monitor primary system conditions from the hot shutdown panel using T_{cold} . The inspector discussed these issues with NRR, Auxiliary Systems Branch, who confirmed that the licensee's approach is satisfactory."

St. Lucie Unit 2 Safety Evaluation Report NUREG Supplement 0843 (SER) references FPL letter L-82-208 dated May 17, 1982 which responds to the use of T_{cold} on Unit 2. Section 9.5.1.6 of SER Supplement 3 identifies the use of TE-1115 and TE-1125 which provide T_{cold} indication. It states that:

"Based on the above, we conclude that the instrumentation outside of the control room, and, therefore, the alternative shutdown capability, complies with the guidelines of Section III.L of Appendix R and is therefore, acceptable."

Based on the above, the information submitted to NRR in 1982 for Unit 2 and incorporated in the 1983 submittal for Unit 1 was satisfactory. Furthermore, the Unit 2 SER Supplement 3 reflects NRC acceptance. FPL, therefore, considers this issue to be resolved.

Open Item #2: The lack of analysis of multiple high impedance faults.

Postulating multiple high impedance faults simultaneously for branch circuits goes beyond the scope of electrical distribution system design. For the multiple high impedance fault scenario to take place, multiple branch circuit cables would have to fail along their length in such a manner as to result in a unique insulation resistance that would produce a leakage current to ground, or conductor to conductor, which when added to the conductor load would result in a current just below the branch circuit protective device rating.

These fault currents would then have to be sustained long enough to cause the supply breaker to trip. Thus, an improbable combination of temporary leakage current in multiple cables would have to occur simultaneously to trip the supply breaker. Due to the low probability of the above described specific fault condition of the cables, an analysis of multiple high impedance faults was not deemed necessary.

However, FPL will add a general note in the Alternate Shutdown procedure to permit restoration of essential equipment should a bus feeder breaker trip due to fire. The note will alert plant personnel to trip all bus loads prior to restoration of power to the bus, and to restart only necessary loads.