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TO:
Mr. James P. O'Reilly

FROM:
Florida Power & Light Company
Miami, Florida
Robert E. Uhrig

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DESCRIPTION

ENCLOSURE

Consists of response to IE Bulletin No. 77-06 concerning containment electrical penetrations.....

(1-P)

(4-P)

PLANT NAME: St. Lucie 1-2/Turkey Point Units 3 & 4

RJL 12/13/77

SAFETY

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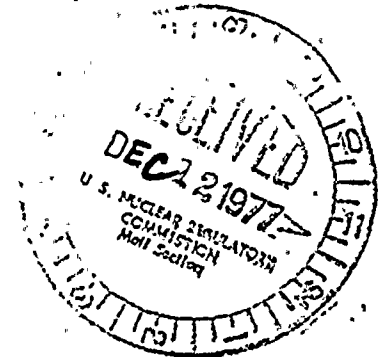
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REGULATORY DOCKET FILE COPY

Mr. James P. O'Reilly, Director, Region II
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
230 Peachtree Street, N. W., Suite 1217
Atlanta, GA 30303



Dear Mr. O'Reilly:

Re: RII:JPO
50-335, 50-389
50-250, 50-251

Florida Power & Light Company has reviewed IE Bulletin 77-06 and a response is attached.

Very truly yours,

Robert E. Uhrig
Vice President

REU/MAS/lah

Attachment

cc: Robert Lowenstein, Esquire
~~Office of Inspection and Enforcement~~

773470025



ATTACHMENT

Re: RII:JPO
50-335, 50-389
50-250, 50-251

Question 1.0

Do you have containment electrical penetrations that are of the G.E. Series 100, or are otherwise similar in that they depend upon an epoxy sealant and a dry nitrogen pressure environment to ensure that the electrical and pressure characteristics are maintained so as to ensure the functional capability as required by the plant's safety analysis report; namely (1) to ensure adequate functioning of electrical safety related equipment and (2) to ensure containment leak tightness?

Response 1.0

The containment electrical penetrations for the Turkey Point and St. Lucie nuclear units are not of the G.E. Series 100, nor do they depend upon an epoxy sealant and a dry nitrogen pressure environment to ensure that proper electrical and pressure characteristics are maintained.

The safety related penetrations at Turkey Point Units 3 and 4 were manufactured by Crouse-Hinds Co. Those at St. Lucie Unit 1 were manufactured by Gulf Atomic Company and Conax Corporation.

Question 1.1

Have you experienced any electrical failures with this type of penetration?

Response 1.1

This question is not directly applicable because the containment electrical penetrations for the Turkey Point and St. Lucie nuclear units are not of the type referenced in Question 1.0.

With respect to the safety related penetrations that are in use at Turkey Point Units 3 and 4 and St. Lucie Unit 1, there have been no electrical failures at Turkey Point and only two electrical failures at St. Lucie. The St. Lucie failures were caused by solder joint fabrication errors which were not environmentally related.

Question 2.0

For those penetrations referenced in Item 1 above, have you maintained the manufacturer's prescribed nitrogen pressure at all times?

Response 2.0

This question is not directly applicable because the containment electrical penetrations for the Turkey Point and St. Lucie nuclear units are not of the type referenced in Question 1.0.

Question 2.1

If you have operated the penetrations without maintaining a nitrogen pressure, was any degradation of insulation resistance or anomalous component operation detected?

Response 2.1

Same as Response 2.0.

Question 2.2

If no measurements were taken during periods when nitrogen pressure was not maintained, how were you assured that the insulation resistance was not degrading or degraded?

Response 2.2

Same as Response 2.0.

Question 2.3

How do you determine that circuit insulation resistance values are satisfactorily maintained?

Response 2.3

Same as Response 2.0.



Question 3.0

Is there a need, as determined by either the vendor or yourself, to maintain penetrations pressurized during a LOCA?

Response 3.0

The containment electrical penetrations for the Turkey Point and St. Lucie nuclear units are not of the type referenced in Question 1.0 and do not need to be pressurized. They are designed to function without pressurization in the pressure and temperature environment of a LOCA.

Question 3.1

What measures have you taken to ensure that penetrations of this type will perform their design function under LOCA conditions? (Design review, analyses or tests)

Response 3.1

We assume that the wording "penetrations of this type" means penetrations that are of the G.E. Series 100 or are otherwise similar in that they depend upon an epoxy sealant and a dry nitrogen pressure environment to ensure that proper electrical and pressure characteristics are maintained. Under this assumption, Question 3.1 is not directly applicable because the containment electrical penetrations for the Turkey Point and St. Lucie nuclear units are not of that type.

Even though penetrations of the suspect type are not used by FPL, we have conducted a review of the design specifications of the penetrations we do use and have confirmed that they were designed to perform under LOCA conditions.

The ability of the electrical penetrations used at Turkey Point Units 3 & 4 and St. Lucie Unit 1 to function under Design Basis Accident (DBA) conditions has been verified by prototype testing and by testing each penetration before installation.

Question 3.2

Are the measures that provide this assurance adequate to satisfy the Commission's regulations (GDC 4, Appendix A to Part 50; QA criteria, Appendix B to Part 50)?

Response 3.2

Same as Response 3.1 with the following additional information:

As stated in the Final Safety Analysis Reports for Turkey Point and St. Lucie, all systems vital to safe shutdown and isolation of the reactor or whose failure might cause or increase the severity of an accident or result in an uncontrolled release of excessive amounts of radioactivity conform to GDC 4. Such systems include electrical penetrations.

Quality assurance requirements in effect at the time of issuance of the FSAR's were applied to containment electrical penetrations.