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50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
AUTH.NAME AUTHOR AFFILIATION
UHRIG,R.E. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
VARGA,S.A. Operating Reactors Branch 1

SUBJECT: Forwards responses to NRC 800316 questions re NUREG-0737 Items II.F.1.4,II.F.1.5 & II.F.1.6 on addl accident monitoring instrumentation.

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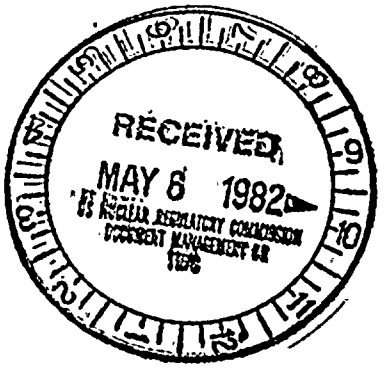
FLORIDA POWER & LIGHT COMPANY

May 3, 1982
L-82-180



Office of Nuclear Reactor Regulation
Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Varga:

Re: Turkey Point Units 3 & 4
Docket Nos. 50-250 & 50-251
Post-TMI Requirements
Additional Accident Monitoring
Instrumentation

The attachment to this letter contains our responses to the questions concerning NUREG-0737 Items II.F.1.4, II.F.1.5, and II.F.1.6 provided in your letter of March 16, 1982.

Very truly yours,

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/PKG/cab

Attachment

cc: J. P. O'Reilly, Region II
Harold F. Reis, Esquire

A046
S1/1

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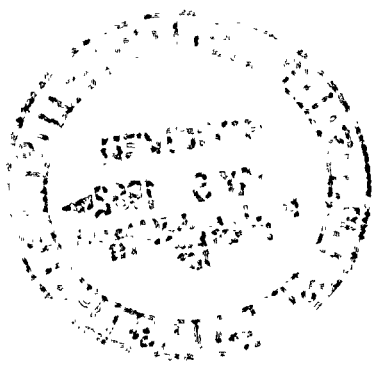

ATTACHMENT

Turkey Point Units 3 & 4
Docket Nos. 50-250 and 50-251
Post-TMI Requirements
Additional Accident Monitoring
Instrumentation

Q1. In the submittals received to date you have not indicated that you plan to take exception to any of the requirements of NUREG-0737. Are you planning any exceptions of which we are not aware?

A1. II.F.1.4 Containment Pressure Monitoring

No exceptions are being taken to the requirements of NUREG-0737.

II.F.1.5 Containment Water Level Monitor

The only planned exception to the requirements of NUREG-0737 is to the measurement capacity of 600,000 gallons.

The containment sump water level monitors have the capability of measuring the total containment water up to elevation 21'-6" which is a calculated water level of 518,925 gallons. This level exceeds the calculated water inventory of 396,440 gallons available to flood the containment to an approximate level of elevation 19'-0".

II.F.1.6 Containment Hydrogen Monitor

The only planned exception to the requirements of NUREG-0737 is to the provision for the capability to selectively monitor hydrogen concentrations at different locations. Hydrogen sampling is taken from the existing containment post accident vent system and no additional containment penetrations are available to meet this new requirement to NUREG-0737.

Q2. (II.F.1.4) What is the accuracy* of your pressure monitor? State this for both the indicator and the recorder.

A2. The containment pressure monitors are divided into two ranges to meet the range requirements of RG 1.97. The two ranges are -6 to +18 psig and 0-180 psig.

The indicators have an accuracy of 2.0% of full scale and the recorder 1.0% of full span. Because of the maintained calibration the accuracy parameter is a 90% confidence level.

Q3. (II.F.1.4) What is the time response** of your pressure monitor? State this for both the indicator and the recorder.

A3. The response time of the pressure monitors is 2.5 seconds for a full scale change of the pressure indicators and 1 second for a full scale change on the recorder.

Q4. (II.F.1.5) What is the accuracy* of your water level monitor? State this for both the wide range instrument and the narrow range instrument.

A4. The containment sump and the containment water level monitors are float operated that have a relationship within 1/2 inch of actual water level. This produces accuracies as follows:

Containment Sump Water Level

Range 390", accuracy = 0.13% full range
System indicator accuracy = 1.63% full scale
System recorder accuracy = 0.63% full span

Containment Water Level

Range 90", accuracy = 0.55% full range
System indicator accuracy = 2.05% full scale
System recorder accuracy = 1.05% full span

Because of the maintained calibration the accuracy parameter is a 90% confidence level.

Q5. (II.F.1.6) Where are the hydrogen sample ports placed?

A5. The hydrogen monitor sample connections tie-in to the existing post accident containment ventilation system outside containment. The post accident containment ventilation sample ports are placed in two separate pipe headers near the containment dome. Each header contains 90, 1/4" holes.

Q6. (II.F.1.6) Is there any obstruction which would prevent hydrogen from the core from reaching the hydrogen sample ports reasonably quickly?

A6. The hydrogen sample ports are located in the upper containment where there will be a good mixing and thus provide a representative sample of hydrogen in the containment.

In addition the shield walls layout in the containment is such that all compartments are vented to the containment dome area where the sample ports are located.

Q7. (II.F.1.6) What is the accuracy* of your hydrogen monitor?

A7. The accuracy of the containment hydrogen monitors is ± 2% of full scale with the instrument range of 0-10% hydrogen. This gives a system recorder accuracy of ± 2.5% of full span.

Because of the maintained calibration the accuracy parameter is a 90% confidence level.

*Accuracy in control room.
**Time response in control room.