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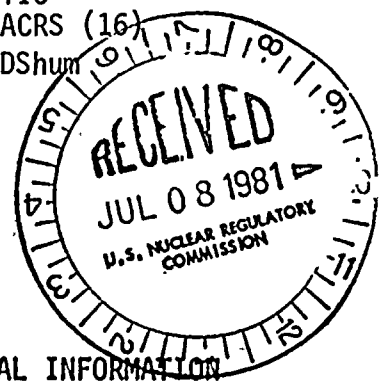

Docket No.: 50-389

Dr. Robert E. Uhrig, Vice President
Advanced Systems and Technology
Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152

Dear Dr. Uhrig:

SUBJECT: ST. LUCIE PLANT, UNIT 2 FSAR - REQUEST FOR ADDITIONAL INFORMATION

From the review of your application for an operating license by the Containment Systems Branch, we find that we need additional information regarding the St. Lucie Plant, Unit 2 FSAR. The specific information (which was provided to Mr. Sheetz on June 19, 1981) required is listed in the Enclosure.

Responses to the enclosed request should be submitted by July 10, 1981, If you cannot meet this date, please inform us within seven days after receipt of this letter of the date you plan to submit your responses.

Please contact Mr. Nerses (301-492-7468), St. Lucie 2 Project Manager, if you desire any discussion or clarification of the enclosed report.

Sincerely,

Original signed by
Robert L. Tedesco

Robert L. Tedesco, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page

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OFFICE	DL:LB#3	DL:LB#3	DL:AD/L				
SURNAME	VNerses/wt	FJMiraglia	RLTedesco				
DATE	6/23/81	6/24/81	6/24/81				

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

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Division of Licensing

Enclosure:
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480.0

480.1 Figure 6.2-9 and Figure 6.2-10, with respect to containment pressure and temperature responses following a MSLB accident, should be revised to show the containment pressure/temperature response profiles (from time = 0 second to 10^5 seconds following the accident) for use in equipment qualification.

480.2 For compartment (e.g., reactor cavity, secondary shield wall area, and pressurizer area) structural design evaluations, provide the design differential pressure and discuss whether the design differential pressure is uniformly applied to the compartment structure or whether it is spatially varied.

480.3 Provide analyses to determine the external forces and moments, resulting from postulated hot leg and cold leg ruptures within the reactor cavity, on reactor vessel supports. If applicable, similar analyses should be performed for steam generator and/or pressurizer compartments that may be subject to pressurization where significant component support loads may result. For each analysis, provide the following information:

(a) Provide and justify the pipe break type, area, and location. Specify whether the pipe break was postulated for the evaluation of the compartment structural design, component support design, or both.

(b) For each compartment, provide a table of blowdown mass flow rate and energy release rate as a function of time for the break which was used for the component support evaluation.

EVALUATION

(c) Describe and justify the modelization sensitivity studies performed for the major component supports evaluations (if different from the structural analysis model), where transient forces and moments acting on the components are of concern. Where component loads are of primary interest, show the effect of noding variations on the transient forces and moments. Use this information to justify the nodal model selected for use in the component supports evaluation.

(d) Graphically show the pressure (psia) and differential pressure (psi) response as functions of time for a representative number of nodes to indicate the spatial pressure response. Discuss the basis for establishing the differential pressure on components.

(e) Provide the peak and transient loading on the major components used to establish the adequacy of the support design. This should include the load forcing functions (e.g., $f_x(t)$, $f_y(t)$, $f_z(t)$) and transient moments (e.g., $M_x(t)$, $M_y(t)$, $M_z(t)$) as resolved about a specific identified coordinate system. The centerline of the break nozzle is recommended as the X-axis and the center line of the vessel as the Z axis. Provide the projected area used to calculate these loads and identify the location of the area projections on plan and section drawings in the selected coordinate system. This information should be presented in such a manner that confirmatory evaluations of the loads and moments can be made.

480.4 Figure 6.2-71, regarding containment isolation valves, should be revised to show the containment isolation valve arrangements for each containment penetration. In addition, the isolation valve arrangements

shown in this figure should be consistent with the valve arrangements as shown in the system flow diagrams.

480.5 FSAR Sections 6.2.4.1.1 and 7.3.1.1.4 indicate that either a high containment pressure signal or a high containment radiation level signal will generate a containment isolation actuation signal. However, SRP Section 6.2.4 also recommends that a high radiation signal should not be considered one of the diverse containment isolation parameters. Therefore, we request that the safety injection actuation signal should be used as one of the parametrs for the initiation of containment isolation, and the above cited FSAR sections should be revised accordingly.

480.6 FSAR Section 6.2.4.4 indicates that the following penetrations will not be considered possible sources of bypass leakage and, therefore, will not be subject to Type C leak rate testing:

a) Main steam (Penetrations 1 and 2);
b) Feedwater (Penetrations 3 and 4);
c) Steam generator blowdown (Penetrations 5 and 6); and
d) Steam generator blowdown sampling (Penetrations 30 and 49).

In order for us to determine the acceptability of this, discuss the conditions that will exist or the action to be taken to assure that outleakage will not occur after a LOCA for a period of 30 days. In this regard, discuss the pressure response of the steam geneators relative to the containment pressure, in the short term, and the feasibility of reflodding the steam generators, in the long term, to preclude outleakage.

480.7 FSAR Section 6.2.4.2 indicates that only one isolation valve outside containment is provided for the isolation of each of the containment emergency sump suction lines. For this type of isolation valve arrangement, the piping between the containment and the valve should be enclosed in a leak-tight or controlled leakage housing (as described in SRP Section 6.2.4) leakage housing. If, in lieu of a housing, conservative design of the piping and valve is assumed to preclude a break of piping integrity, the design should conform to the requirement of SRP Section 3.6.2. Also, design of the valve and/or the piping compartment should provide the capability to detect leakage from the valve shaft and/or bonnet seals and terminate the leakage. Therefore, discuss the design of the containment emergency sump suction penetrations (Penetrations 32 and 33), and the leakage detection and control provisions.

480.8 Table 6.2-52, "Containment Penetraton and Isolation Valve Information," should be revised to designate the fuel transfer tube (Penetration 25) and charging line (Penetration 27) as direct bypass leakage paths.

480.9 Provide the information as required by NUREG-0737 concerning the following TMI Action Plan items:

a) II.E.4.2 - Containment Isolation Dependability;

b) II.F.1.4 - Containment Pressure Monitor; and

c) II.F.1.6 - Containment Hydrogen Monitor.

JUN 29 19

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