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 FACIL: 50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
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 UHRIG, R.E. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 REID, R.W. Operating Reactors Branch 4

SUBJECT: Forwards rept "RCS Asymmetric LOCA Load Evaluation," in response to NRC 780216 request. Probability of pipe failure is acceptably low. Facility has significant capability to accommodate nondesign basis events.

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 TITLE: Asymmetric Loca Loads

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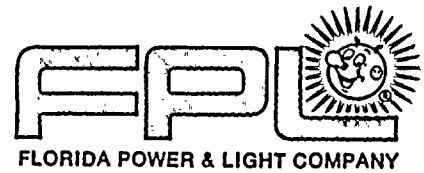
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March 7, 1980
L-80-77

Office of Nuclear Reactor Regulation
Attention: Mr. R. W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Reid:

Re: St. Lucie Unit 1
Docket No. 50-335
Asymmetric LOCA Loads

The NRC Staff's February 16, 1978 letter requested that we expand the asymmetric LOCA load analysis beyond the scope committed to in our letter of February 9, 1976, which addressed the capability of reactor vessel supports only. Our August 1977 report, entitled "Reactor Support System - Evaluation of Margins", was fully responsive to our February 1976 commitment. By letter dated March 23, 1978, we indicated a willingness to consider further studies once FP&L received Staff concurrence as to the acceptability of the analytical methods used in our August 1977 report. On January 16, 1980, the Staff and its consultant met with us to discuss the asymmetric load evaluation for St. Lucie Unit 1. At that time, we agreed to provide additional data on our efforts to assess the effects of asymmetric LOCA loads.

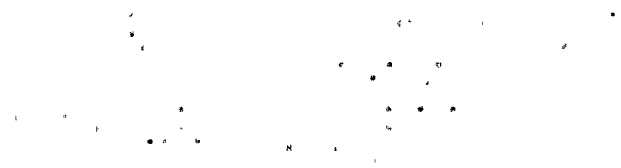
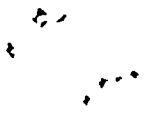
Our willingness to pursue the complex studies requested by the Staff should not be construed to mean that we concur with the need for such studies. To the contrary, we believe that sufficient data exists to support the contention that these large reactor coolant system pipes cannot fail in the instantaneous manner postulated by the Staff. The studies have been conducted because we recognize the Staff's need to assess the potential impact that could be associated with these exceedingly low probability events.

The attached report discusses additional analyses conducted to assess the significance of structural gaps, the capability of other reactor coolant system component supports, and the effects of connected ECCS piping. The conclusion reached is that, for the guillotine breaks analyzed, the existing design can acceptably accommodate these arbitrarily postulated events. These analyses also reconfirm the conclusions reached in our August 1977 report.

Studies are also underway to assess the capability of the fuel/internals and control element drive mechanisms. The results of these studies are anticipated in July 1980. It must be noted, however, that the small displacements observed for the reactor pressure vessel and core barrel strongly suggest that these studies will also yield acceptable results.

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The conclusions to be derived from our efforts to date are that the probability of the types of pipe failures required to be assumed for these analyses is acceptably low, and that the St. Lucie Unit 1 design has a significant inherent capability to accommodate these non-design basis events.

Very truly yours,



RU
Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/FGF/PKG/cph

Attachment

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