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AUTH.NAME AUTHOR AFFILIATION
UHRIG,R.E. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
CLARK,R.A. Operating Reactors Branch 3

SUBJECT: Forwards plant recovery plan presented at 830425 meeting re reactor vessel internals & thermal shield, in response to Item C of 830419 ltr, Plan will be revised daily w/updates provided upon availability.

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P. O. BOX 14000, JUNO BEACH, FL 33408

FLORIDA POWER & LIGHT COMPANY

April 27, 1983
L-83-264

Office of Nuclear Reactor Regulation
Attention: Mr. Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Clark:

Re: St. Lucie Unit 1
Docket No. 50-335
Reactor Vessel Internals and Thermal Shield;
Plant Recovery Program

In a meeting on April 25, 1983, Florida Power and Light Company provided you with a presentation detailing the present St. Lucie Unit 1 Plant Recovery Plan. Although this Plan will be revised on nominally a daily basis, with updates provided to you as they become available, we have enclosed the Plan presented to you on April 25th, in satisfaction of item C. in our letter of April 19, 1983 (L-83-230).

Should any questions arise, please contact us immediately.

Very truly yours,

Robert E. Uhrig

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/DAC/cab

cc: Harold F. Reis, Esquire

Enclosure

A049

ATTACHMENT

ST. LUCIE UNIT 1 EFFECT ON FUEL PERFORMANCE

Results from neutronics measurements and mechanical observation indicative of fuel integrity or the presence of loose debris in the active core region substantiate that no abnnormal fuel failure has precipitated from the thermal shield failure. Neutronics parameters and fuel observations demonstrate no abnormal behavior which can be attributed to a change in fuel performance as a result of thermal shield failure.

For full power equilibrium conditions following Cycle 1, neutronics parameters which would be sensitive to debris related fuel failure have been nominal. Both total unrodded planar radial peaking factor and asimuthal power tilt measurements have been in continuous agreement with expected values. Full core power distribution measurements have been consistently in good agreement with design predictions both on a local as well as an overall basis. Fixed incore detector signals have been as expected. The measured DEQ I-131 values have been assessed and determined to be equivalent to other plants of this vintage. The estimated number of perforated fuel rods has been small (always less than 15). All CEA worth, boron and core reactivity measurements have been in agreement with design prediction for each reload. In general, core performance has been as expected since Cycle 1.

Mechanical observations have not supported the presence of thermal shield debris in or on any fuel assemblies. During this refueling outage a core scan was performed prior to fuel movement. This inspection, via an underwater TV camera of the top of the fuel, demonstrated that no metallic debris was present. This is also true for the previous refueling outage core scans. The lower end fitting of 94 Cycle 5 fuel assemblies were inspected for debris during the fuel offload in support of the plant recovery plan. No debris was discovered in this inspection. Unit 1 has no instances of CEA's either failing the CEA drop time requirement or becoming immovable or untrippable as a result of excessive friction or mechanical interference.

In summary, there is no objective evidence to date which is indicative of fuel failure resulting from the thermal shield failure. In addition, there are no indications to date of anomalous fuel failure or fuel problems since Cycle 1.