

January 13, 2006

Mr. J. A. Stall
Senior Vice President, Nuclear and
Chief Nuclear Officer
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: ST. LUCIE UNIT 1 - REVIEW OF THE ST. LUCIE UNIT 1 STEAM
GENERATOR TUBE INSERVICE INSPECTION REPORT FOR THE
SPRING 2004 OUTAGE (TAC NO. MC6764)

Dear Mr. Stall:

By letters dated April 13, 2004, and April 8 and November 9, 2005, Florida Power & Light Company (the licensee) submitted reports summarizing the steam generator tube inspections performed during the spring 2004 refueling outage (SL1-19) at St. Lucie Unit 1. The results of the U.S. Nuclear Regulatory Commission (NRC) staff review of these documents is summarized below.

St. Lucie Unit 1 has two recirculating steam generators designed and fabricated by Babcock and Wilcox International. The steam generators were put into service in 1998 during the SL1-15 refueling outage. Each steam generator has 8523 thermally treated Alloy 690 tubes that have an outside diameter of 0.75 inch and a nominal wall thickness of 0.045 inch. The tubes were manufactured by Sumitomo Special Metals. The tubes are arranged in a triangular pattern with a spacing of approximately 1.0 inch. The tubes were hydraulically expanded at each end for the full depth of the tubesheet. The tubesheet is 21.5-inches thick (with the clad the tubesheet is 21.875-inches thick). The tubes are supported by lattice grid tube supports and fan bars (the lowest most fan bar is also referred to as a collector bar since all other fan bars connect to it). All supports are constructed from type 410 stainless steel. The U-bend region of the tubes in rows 1 through 20 received a supplemental thermal treatment (stress relieving) after bending. The smallest U-bend radius occurs in Row 3 and is 3.905 inches. The Row 1 U-bend radius measures 4.272 inches.

The licensee provided the scope, extent, methods, and results of their steam generator tube inspections in the documents referenced above. In addition, the licensee described corrective actions (e.g., tube plugging or repair) taken in response to the inspection findings. Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by their technical specifications. In addition, the staff concludes that there are no technical issues that warrant follow-up action at this time since the inspections appear to be consistent with the objective of detecting potential tube degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

J. Stall

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January 13, 2006

This completes NRC staff's efforts under TAC No. MC6764. If you have any questions regarding this matter, please contact me at 301-415-3974.

Sincerely,

/RA/

Brendan T. Moroney, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-335

cc: See next page

Mr. J. A. Stall
Florida Power and Light Company

ST. LUCIE PLANT

cc:
Senior Resident Inspector
St. Lucie Plant
U.S. Nuclear Regulatory Commission
P.O. Box 6090
Jensen Beach, Florida 34957

Mr. G. L. Johnston
Plant General Manager
St. Lucie Nuclear Plant
6351 South Ocean Drive
Jensen Beach, Florida 34957

Craig Fugate, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399-2100

Mr. Terry Patterson
Licensing Manager
St. Lucie Nuclear Plant
6351 South Ocean Drive
Jensen Beach, Florida 34957

M. S. Ross, Managing Attorney
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

Mark Warner, Vice President
Nuclear Operations Support
Florida Power and Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

Marjan Mashhadi, Senior Attorney
Florida Power & Light Company
801 Pennsylvania Avenue, NW.
Suite 220
Washington, DC 20004

Mr. Rajiv S. Kundalkar
Vice President - Nuclear Engineering
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

Mr. Douglas Anderson
County Administrator
St. Lucie County
2300 Virginia Avenue
Fort Pierce, Florida 34982

Mr. J. Kammel
Radiological Emergency
Planning Administrator
Department of Public Safety
6000 Southeast Tower Drive
Stuart, Florida 34997

Mr. William A. Passetti, Chief
Department of Health
Bureau of Radiation Control
2020 Capital Circle, SE, Bin #C21
Tallahassee, Florida 32399-1741

Mr. William Jefferson, Jr.
Site Vice President
St. Lucie Nuclear Plant
6351 South Ocean Drive
Jensen Beach, Florida 34957-2000

This completes NRC staff's efforts under TAC No. MC6764. If you have any questions regarding this matter, please contact me at 301-415-3974.

Sincerely,

/RA/

Brendan T. Moroney, Project Manager
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