UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

May 29, 2013

Mr. Mano Nazar
Executive Vice President and Chief Nuclear Officer
Florida Power and Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: ST. LUCIE PLANT - NOTIFICATION OF INSPECTION AND REQUEST FOR INFORMATION

Dear Mr. Nazar:

The Nuclear Regulatory Commission (NRC) will perform the triennial baseline heat sink (HS) inspection at your St. Lucie Plant from July 8 – 12, 2013. To minimize the impact to your on-site resources and to ensure a productive inspection, we have enclosed a request for documents needed for this inspection. These documents have been divided into two groups. The first group (Section A of the enclosure) identifies information to be provided prior to the inspection to facilitate the selection of inspection samples and ensure that the inspectors are adequately prepared. The second group (Section B of the enclosure) identifies additional information needed during the onsite inspection week for the selected inspection samples.

On May 8, 2013, the lead inspector contacted Mr. Donald Cecchett of your organization to discuss the schedule and logistics of this inspection. If there are any questions about this inspection or the material requested, please contact the lead inspector, Joel Rivera-Ortiz, at 404-997-4825 (Joel.Rivera-Ortiz@nrc.gov).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document

Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

//RA//

Steven J. Vias, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-335, 50-389
License Nos. DPR-67, NPF-16

Enclosure:
Document Request for Heat Sink Performance Inspection

cc: (See page 3)

cc:
Joseph Jensen
Site Vice President
St. Lucie Nuclear Plant
Electronic Mail Distribution

Paul Freeman
Vice President
Organizational Effectiveness
Florida Power & Light Company
Electronic Mail Distribution

Peter Wells
Vice President
Outage Support CFAM
Florida Power & Light Company
Electronic Mail Distribution

Robert J. Hughes
Plant General Manager
St. Lucie Nuclear Plant
Electronic Mail Distribution

Daniel D. DeBoer
Operations Site Director
St. Lucie Nuclear Plant
Electronic Mail Distribution

Eric Katzman
Licensing Manager
St. Lucie Nuclear Plant
Electronic Mail Distribution

Larry Nicholson
Director
Licensing
Florida Power & Light Company
Electronic Mail Distribution

Alison Brown
Nuclear Licensing
Florida Power & Light Company
Electronic Mail Distribution

Cynthia Becker
(Acting) Chief
Florida Bureau of Radiation Control
Department of Health
Electronic Mail Distribution

Bryan Koon
Director
Florida Division of Emergency Management
Electronic Mail Distribution

Donna Calabrese
Emergency Preparedness Manager
St. Lucie Plant
Electronic Mail Distribution

J. Kammel
Radiological Emergency Planning
Administrator
Department of Public Safety
Electronic Mail Distribution

Senior Resident Inspector
St. Lucie Nuclear Plant
U.S. Nuclear Regulatory Commission
P.O. Box 6090
Jensen Beach, FL 34957-2010

Michael Baughman
Training Manager
St. Lucie Nuclear Plant
Electronic Mail Distribution

Faye Outlaw
County Administrator
St. Lucie County
Electronic Mail Distribution

James Petro
Managing Attorney-Nuclear
Florida Power & Light Company
Electronic Mail Distribution

Jack Southard
Director
Public Safety Department
St. Lucie County
Electronic Mail Distribution

DOCUMENT REQUEST FOR HEAT SINK PERFORMANCE INSPECTION

Inspection Dates: July 8 – 12, 2013

Inspection Procedures: IP 71111.07, "Heat Sink Performance," Triennial Review

Inspectors: J. Rivera-Ortiz, Senior Reactor Inspector (Lead Inspector)

A. Information Requested for the In-Office Preparation Week

The following information should be sent to the Region II office in hard copy or electronic format (preferred), in care of Joel Rivera-Ortiz, by June 28, 2013 to facilitate the selection of specific items that will be reviewed during the onsite inspection week. The inspector will select specific items from the information provided for section A.1 below and then request additional documents needed for the onsite inspection week as discussed in section B.1 of this enclosure. We ask that the specific items selected from the lists be available and ready for review on the first day of inspection. *Please provide requested documentation in electronic format if possible. If requested documents are large and only hard copy formats are available, please inform the inspector(s), and provide subject documentation during the first day of the onsite inspection. If you have any questions regarding this information request, please call the lead inspector at the earliest convenience.

A.1 Heat Exchangers and Service Water Equipment

a) List of heat exchangers and equipment cooled by service water (SW) directly or indirectly.

b) For the heat exchangers listed in item (a) above, provide the program documents that govern the performance monitoring of these heat exchangers including testing methods and frequency, inspection methods and frequency, maintenance, monitoring of biotic fouling and macro-fouling, and chemistry control, as applicable.

c) As applicable, provide a list of risk-significant components in the service water system and Ultimate Heat Sink (UHS) with their respective risk ranking, including the heat exchangers listed for item (a) above.

d) List of risk-significant non-safety related functions supported by the service water system.

e) Response to NRC Generic Letter 89-13, including any regulatory commitments made to the NRC in response to this Generic Letter or other regulatory commitments associated with service water system and UHS performance.

f) Design Basis Documents associated with the SW system and the Ultimate Heat Sink. Please include a description of the UHS design for the site. Particularly whether the UHS is above ground encapsulated by embankments, weirs or excavated side slopes, underwater weir or excavation, forced draft cooling tower or spray pond.

g) Latest version of the Final Safety Analysis Report chapters addressing SW system and UHS design.

h) Basic service water system flow diagrams.

i) System Health Reports for the last three years associated with the SW system and systems that are cooled by SW.

j) List of components or systems in Maintenance Rule a(1) status due to SW system interaction.

k) List of corrective action documents (with a brief problem description) in the last three years for SW related issues, including conditions adverse to quality that have received a Root Cause Analysis or an elevated severity level in the site's Corrective Action Program.

l) Industry Operating Experience events in the last three years related to SW system that have been evaluated through the site's Operating Experience or Corrective Action Program.

m) List of applicable Codes and Industry Guidelines currently used for the performance monitoring of heat exchangers and UHS.

n) List of risk-significant heat exchangers considered redundant or infrequently used.

o) Provide the program documents that govern the performance monitoring of the UHS and its subcomponents like piping, intake screens, pumps, and valves, including testing methods and frequency, inspection methods and frequency, maintenance, monitoring of fouling, and chemistry control, as applicable.

p) Provide flow diagrams indicating buried or inaccessible piping in the service water system and UHS.

q) Program documents governing the inspection, testing, and monitoring of buried piping in the service water system and UHS.

r) List of safety-related and non-safety related valve interfaces between safety-related service water and non-safety related or non-seismic piping systems.

s) List of design changes to the service water system and the UHS in the last three years.

t) As applicable, provide a list of historical through-wall leaks in service water piping for the last three years. Please include the location of the leak(s) and corrective actions taken.

u) Contact information for licensing and engineering staff supporting the inspection.

B. Information to be provided on-site to the inspector at the entrance meeting (July 8, 2013):

B.1 Heat Exchangers and Service Water Equipment

The inspector will select a sample of heat exchangers and/or ultimate heat sink samples from the information provided for section A.1 above, as required by inspection procedure IP 71111.07, during in-office preparation. For the samples selected, the inspectors will request the items listed below, as applicable.

a) Updated list of technical and licensing point of contacts.

b) Copies of selected corrective action documents including supporting documents such as cause evaluations, corrective action plans, work orders, etc.

c) Copies of evaluations and associated corrective actions for selected Operating Experience Events.

d) For the selected heat exchangers or equipment cooled by service water (SW) directly or indirectly, provide documentation associated with:

- Performance testing methodology and results for the last three years
- Inspection/cleaning methods and results of performance inspections for the last three years, including eddy current test inspections to determine the structural integrity of the heat exchanger. For eddy current testing results, please include eddy current examination reports, examiner qualification records, and associated corrective action documents.
- Operating data demonstrating that the heat exchanger's condition and operation is consistent with design assumptions in heat transfer calculations and as described in the UFSAR
- Periodic flow test results at/or near maximum design flow
- Engineering evaluations addressing heat exchanger susceptibility to water hammer and measures in place to address potential water hammer concerns
- Plant operating procedures showing the controls and operational limits in-place to prevent heat exchanger degradation due to excessive flow induced vibration during operation
- Current number of plugged tubes relative to the pre-established plugging limits in design calculations
- Results of chemistry control program for the last three years

e) For selected above-ground UHS encapsulated by embankments, weirs or excavated side slopes, provide documentation for the last three years associated with:

- Licensee or third party dam inspections for monitoring the integrity of the heat sink
- Monitoring results for verification of sufficient reservoir capacity

f) For selected underwater UHS weirs or excavations, provide documentation for the last three years associated with:

- Results of visual or other inspections performed to check for any possible settlement or movement indicating loss of structural integrity and/or capacity, including sediment intrusion that may reduce capacity

g) For selected UHS such as a forced draft cooling tower or spray pond, provide documentation for the last three years associated with the methods and results to verify:

- Reservoir capacity
- Periodic monitoring and trending of sediment build-up
- Periodic performance monitoring of heat transfer capability
- Performance monitoring of the UHS structural integrity

h) For selected operational samples of the service water system and UHS, provide documentation for the last three years associated with:

- Selected design changes to the service water system and the UHS
- Licensee procedures for a loss of the service water system or UHS
- Licensee controls to prevent clogging due to macro-fouling through monitoring and trending
- Results of biocide treatments for biotic control
- For fixed volume UHS, provide results of chemistry monitoring to ensure adequate pH, calcium hardness, etc. are maintained
- Results of pump performance monitoring for potential strong-pump weak-pump interaction in the service water system

i) For selected performance testing samples of the service water system and UHS, provide documentation for the last three years associated with:

- Performance tests, such as ASME in-service tests, of selected components
- Performance testing of isolation capabilities for interface valves between safety-related service water and non-safety related or non-seismic piping systems
- Service water flow balance test results
- Performance of selected risk significant non-safety related functions

j) Please have knowledgeable staff available during the onsite inspection to support walk downs of selected plant structures, systems, and components associated with the service water system and UHS.

Inspector Contact Information:
Joel Rivera-Ortiz, Senior Reactor Inspector
404-997-4825
Joel.Rivera-Ortiz@nrc.gov

Mailing Address:
US NRC Region 2
Attn: Joel Rivera-Ortiz
Marquis One Tower Suite 1200
245 Peachtree Cntr Ave, NE
Atlanta, GA 30303