



Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

December 14, 2009

L-2009- 289
10 CFR 50.36

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Re: St. Lucie Unit 2
Docket No. 50-389
Date of Event: November 25, 2009
Technical Specification Special Report
Reactor Vessel Level Monitoring System "A" Channel Level Probe (HJTC) Out of Service

The attached special report is being submitted pursuant to the requirements of St. Lucie Unit 2 Technical Specification 3.3.3.6, Action c, Table 3.3-10 and Technical Specification 6.9.2. This report provides notification that the plant Reactor Vessel Level Monitoring System "A" Channel Level Probe (HJTC) is inoperable.

Please contact us if there any questions on this information.

Sincerely,

A handwritten signature in black ink that reads 'Eric S. Katzman'.

Eric S. Katzman
Licensing Manager
St. Lucie Plant

ESK/dlc

IE22
NRR

I. TITLE

Reactor Vessel Level Monitoring System (RVLIS) "A" Channel Level Probe (HJTC) Out of Service

II. EVENT DESCRIPTION

On November 25, St. Lucie Unit 2 was in Mode 1 at 100% power. Channel 4A of the RVLMS began operating erratically causing RVLMS alarms. Noted readings of 200F indicated a failure. This failure caused 5 of the 8 detectors on the A channel to be out of service (OOS). The limiting condition for operation (LCO) for TS 3.3.3.6, Action c, Table 3.3-10, states that:

"With the number of OPERABLE Channels one less than the Total Number of Channels shown in Table 3.3-10, either restore the inoperable channel to OPERABLE status within 7 days if repairs are feasible without shutting down or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status."

The instrument is located inside the Unit 2 Reactor Containment Building and initial troubleshooting indicates that the segment(s) malfunction, is located inside containment. Elevated radiation levels at the instrument when operating precludes determination of an exact problem determination.

III. CAUSE OF THE EVENT

Five of Eight "A" Liquid Level Probe segments have been removed from service. All of the "A" Level Probes segments removed from service failed a high temperature indication condition; this type of fault is typical of an open or a high resistance connection.

IV. ACTIONS TAKEN

Plant Engineers and Maintenance personnel are currently evaluating the "A" Channel Level Probe operation. Condition Report 2009-33480 was initiated to identify the failure of the 5 probe segments. Cable analysis testing was performed on from the Main Control Room toward the probe on each of the 5 defective segment's interconnecting cables. Testing identified that the location of instrument failure is inside the reactor containment building. The sensors were placed in the out of service log using procedure 2-IMP-70.05 and work orders have been written:

Troubleshooting Work Orders for "A" Channel Level Probe:
39023990-01 for Segment 4
39022196-01 for Segment 2
39020981-01 for Segments 1, 3 & 5

Plan and Schedule for Restoration:

The Unit 2 "A" Channel Reactor Vessel Level Monitoring System will be returned to service at the next outage of a sufficient duration, or no later than the end of the next refueling outage (SL2-19).