



L-99-275
10 CFR 50.4
10 CFR 50.36
DEC 22 1999

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

Re: St. Lucie Unit 2
Docket No. 50-389
Change in Commitment

Ref: FPL Letter L-97-264 dated October 17, 1997. Subject - Technical Specification Special Report for Failure of Channel B of the Reactor Vessel Level Monitoring System (RVLMS) on September 21, 1997.

In the referenced letter, Florida Power & Light Company (FPL) submitted a Special Report pursuant to the requirements of Technical Specification 3.3.3.6, Action c, and Technical Specification 6.9.2 concerning the failure of the reactor vessel level monitoring system (RVLMS) channel B probe. Investigation revealed low resistance to ground measurements on multiple cable inputs from the channel B RVLMS probe. The cause of the failure could not be determined with the reactor at power because further assessment of the probe assembly and cable connections inside containment was precluded due to high radiation in the area of the probe and cable connections. FPL committed to perform a root cause analysis on the failed RVLMS probe once it was removed during the fall 1998 refueling outage.

During the outage that occurred in late 1998, the connections and cabling to the probe were tested and ruled out as the cause of the failure. The failure appeared to be within the actual probe. The RVLMS probe was replaced and the failed probe was believed to have been transferred to the spent fuel pool. Because of the dose involved with handling the probe and the potential for generation of highly radioactive contamination, a decision was made that a procedure would be required for disassembly and inspection of the failed probe. The root cause evaluation was to be performed as warranty work by a combined team of the supplier and the subcontracted manufacturer. The procedure was completed in late April 1999 and reviewed during May 1999. Based on availability of the appropriate experts for the investigation, a tentative start date in September 1999 was established for performing the root cause effort. In preparation of their arrival, Engineering determined that the probe could not be located and it is believed that the probe had been disposed of as part of an overall effort to clean up the spent fuel pool.

In June 1999, the Health Physics (HP) department had initiated a project to remove longstanding irradiated components from the Unit 1 and 2 spent fuel pools. The scope and schedule for the clean up project had been communicated to all levels of the plant organization and progress was being tracked on the daily plan of the day. However, a detailed listing of the components being removed was not published.

An investigation determined that a personnel error was made during the initial RVLMS probe root cause planning activities in that positive means for controlling the disposition of the probe were not developed. The inadequate communication between Engineering, I&C Maintenance, the contracted reactor crew, and HP led to the inadvertent discarding of the failed probe when St. Lucie removed stored high radiation material from the spent fuel pools. A contributing cause was the multiple accountability transfers that occurred from the time the problem was first identified until the probe was actually dismantled and shipped as waste.

In response to the inadvertent disposal of the RVLMS probe, St. Lucie has revised procedures ADM-08.04, "Root Cause Evaluations," and ADM-20.01, "Event Response Team," to ensure that items identified for root cause investigations are properly tracked and maintained such that they will not be inadvertently discarded. HP is developing a procedure to establish requirements governing control and storage of materials to be stored in the spent fuel pools. This procedure will be implemented by the end of January 2000.

To address the generic implications of this event, FPL conducted a review of industry historical data on liquid level probes. The liquid level probe has been a standard replacement for the heated junction thermocouple at St. Lucie and within the industry for about eight years. It was originally provided with an eight-pin connector and then was offered with a 40-pin connector in 1993. The 40-pin connector probe was first installed Unit 1 in 1996 and Unit 2 in 1997. To date, only one other probe with the 40-pin configuration has been identified as a premature failure. This failed probe is currently installed at the Braidwood Station/Commonwealth Edison Company. The Braidwood liquid level probe is scheduled for replacement during the next scheduled refueling outage in the spring of 2000. ABB/CE has contacted Braidwood to coordinate an analysis for their failed liquid level probe. Additionally, ABB/CE has agreed to communicate the outcome of the root cause analysis with Florida Power and Light. The information from Braidwood is expected to provide insight into the failure at St. Lucie.

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Please contact us if there are any questions regarding this letter.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Thomas F. Plunkett".

Thomas. F. Plunkett
President Nuclear Division
Florida Power & Light

TFP/JAS/EJW/KWF

cc: Luis A. Reyes, Regional Administrator, USNRC Region II
Senior Resident Inspector, USNRC, St. Lucie Plant