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May 14, 2010

L-2010-100

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

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Special Report - Accident Monitoring Instrumentation

In accordance with Technical Specifications 6.9.2 and 3.3.3.3, the attached Special Report is provided for your information.

Should there be any questions regarding this information, please contact Robert J. Tomonto, Licensing Manager at (305) 246-7327.

Sincerely,

Michael Kiley
Vice President
Turkey Point Nuclear Plant

SM

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

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NRC

SPECIAL REPORT

Purpose:

This special report is being submitted pursuant to the requirements of Turkey Point Unit 4 Technical Specification (TS) 3.3.3.3, Table 3.3-5, Instrument 19.d Accident Monitoring Instrumentation, Action 34, part 2 due to the Main Steam Lines High Range-Noble Gas Effluent Monitor, (DAM-1, RAD 6426), being inoperable for greater than 7 days.

Required Action 34 of TS 3.3.3.3, Table 3.3-5, for Item 19.d, states:

“With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter(s), within 72 hours, and:

- 1) Either restore the inoperable channel(s) to OPERABLE status within 7 days of the event, or
- 2) Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 14 days outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.”

Event and Action Taken:

The Process Radiation Monitor (RAD-6426), with Data Acquisition Monitor (DAM-1), is a common Turkey Point Units 3 and 4 Main Steam Lines radiation monitor. The detector reacts to the activity in the main steam line by sampling the main steam at a point in the main steam lines immediately outside of containment and upstream of release paths such as atmospheric dump lines and safety valves. Detected high radiation would be indicative of a primary to secondary leak. The normal background count rate is approximately one count per minute under normal, non-accident conditions. If there is no count in any 10 minute period, the DAM-1 microprocessor registers a “LO count” failure.

On April 25, 2010, both Turkey Point Units 3 and 4 were operating in Mode 1, when the DAM-1 microprocessor alarmed locally and registered a “LO count” failure. On April 25, 2010, at 1715, Operations declared the Main Steam Lines High Range-Noble Gas Effluent Monitor (DAM-1) out of service, in accordance with TS 3.3.3.3, Table 3.3-5, and Instrument 19.d, which requires this monitor to be OPERABLE in Modes 1-3.

A work request was generated to troubleshoot and repair DAM-1. The alternate monitoring was initiated within 72 hours as required by TS 3.3.3.3, Table 3.3-5, Action 34 and it was in place for the entire time the monitor was inoperable. DAM-1 was not restored within 7 days of the event, (prior to May 2, 2010) due to continuing troubleshooting and repair activities. As such, the DAM-1 monitor remained inoperable for greater than 7 days.

Troubleshooting revealed that the DAM-1 Geiger Mueller detector had failed and caused the loss of counts. The inoperability of the detector was prolonged due to multiple intermittent cable related failures.

Corrective actions included the replacement of the Geiger-Mueller detector and repair/replacement of failed cables.

Cause:

The apparent cause evaluation is ongoing. The most probable cause is the Geiger-Mueller detector failure with cable issues as contributing causes.

Schedule for Restoration:

The process radiation monitor DAM-1 was returned to service on May 11, 2010 at 1500.