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JUN 14 2010

L-2010-114

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

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

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

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SPECIAL REPORT

Purpose:

This special report is being submitted pursuant to the requirements of Turkey Point Units 3 and 4 Technical Specification (TS) 3.3.3.3, Table 3.3-5, Accident Monitoring Instrumentation, Instrument 19.d, Action 34, 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. The monitor is used to meet the requirements of Regulatory Guide 1.97 for post accident monitoring. 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 May 22, 2010, both Turkey Point Units 3 and 4 were operating in Mode 1, when the DAM-1 microprocessor was found to be reading High. The Main Steam Lines High Range-Noble Gas Effluent Monitor (DAM-1) was declared inoperable at approximately 0115 on May 23, 2010. Alternate sampling was conducted revealing no activity. TS 3.3.3.3, Table 3.3-5, and Instrument 19.d, requires this monitor to be OPERABLE in Modes 1-3. TS Action 34 requires alternate sampling of the Main Steam Lines to be implemented with 72 hours so Action 34 was entered. A Special Report is also required to be submitted within the next 14 days by the action statement if the inoperable channel is not returned to service within 7 days.

Troubleshooting identified problems with the Geiger-Mueller (G-M) tube and the associated electronics. The alternate monitoring was initiated within 72 hours as required by TS 3.3.3.3, Table 3.3-5, Action 34. DAM-1 was not restored within 7 days of the event, due to continuing troubleshooting and repair activities. As such, the DAM-1 monitor remained inoperable for

greater than 7 days.

Maintenance has restored the DAM-1 RAD-6426 monitor to full operability with no degraded or nonconforming condition. The G-M tube was replaced along with a binary counter chip in the electronics. The monitor was declared operable at 1200, June 9, 2010. DAM-1 is fully capable of performing its specified TS functions.

Cause:

The most probable cause of the monitor reading high was the G-M tube and the binary counter chip in the electronics.

Schedule for Restoration:

The process radiation monitor DAM-1 has been returned to service.