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L-2010-288

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

Re: Turkey Point Unit 3
Docket Nos. 50-250
Special Report - Accident Monitoring Instrumentation Inoperable

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

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

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SPECIAL REPORT

Purpose

The Turkey Point Unit 3 Technical Specification (TS) Limiting Condition for Operation (LCO) 3.3.3.3, Table 3.3-5, Accident Monitoring Instrumentation, for Instrument 17, "Neutron Flux, Back Up NIS (Wide Range)," requires that 2 Channels (3A and 3B) are OPERABLE in Modes 1-3. If either channel is inoperable, then TS 3.3.3.3, Table 3.3-5 Action 31 applies. The required Action 31 states:

"With the number of OPERABLE accident monitoring instrumentation channel(s) less than the Total Number of Channels either restore the inoperable channel(s) to OPERABLE status within 30 days, or 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."

This special report is being submitted pursuant to the requirements of TS 3.3.3.3, Table 3.3-5, Action 31, and pursuant to the Specification 6.9.2 due to the TS 3.3.3.3 Table 3.3-5, Instrument 17, 3B Channel being inoperable and unable to be restored to OPERABLE status within 30 days.

Event and Action Taken

The Gamma-Metrics accident monitor (Instrument 17) serves as backup to the primary neutron flux nuclear instrumentation system (NIS) Excore monitors. It provides independent neutron flux indication in the control room and at the alternate shutdown panel. This instrument utilizes fission chambers to monitor neutron leakage from a completely shutdown condition 10E-6 to 200% of full power.

During the Unit 3 shutdown activities for the Cycle 25 refueling outage, it was observed that the 3B Channel Wide Range Neutron Flux Back up to NIS monitor was indicating 3 decades higher than expected. The monitor is not required to be operable in Modes 4-6. This condition was entered in to the corrective action program.

Troubleshooting identified that noise on the Gamma-Metrics cable 3NFMSB/T3I02-NQ3-6649B/00C located between the Signal Amplifier Cabinet NQ-3-6649B in the 4B MCC room and the Unit 3 West Electrical penetration room at Penetration T3I02, port 15, was affecting the instrument's range of operation below 5E-3 % power. It was determined that the major contributor to the noise was degradation on the coaxial Gamma-metrics cable. Additionally, the non conforming material condition resulting in a loose connector at the electrical containment penetration port is contributing to the level of noise affecting the instrument's operation.

The degraded cable and the electrical penetration port loose connector were not repaired/replaced during the Unit 3 Cycle 25 refueling outage due to parts unavailability. The 3B channel was removed from service on November 3, 2010, while Unit 3 was returning to power.

Further evaluation to restore the monitor to an operable status was ongoing. On November 18, 2010, it was determined that the Neutron Flux, Back Up to NIS (Wide Range) 3B Channel could not be restored to an OPERABLE status within the TS action allowed outage time of 30 days.

Cause of Inoperability

The cause of the inoperability is the high level of cable noise caused by the degraded Gamma-Metrics cable and the loose connector at the associated electrical penetration port.

Schedule for Restoration:

This non-conforming condition was entered in the Turkey Point corrective action program to track corrective actions to restore the monitor to OPERABLE status.

Replacement of the damaged cable is scheduled for the first Quarter in 2011.

Repairs of the connector issues at the electrical containment penetration port require unit shutdown and are scheduled for the next refueling outage, Unit 3 Cycle 26.