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Point Beach Nuclear Plant, Unit 1
Docket 50-266
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Post Accident Monitoring Instrumentation Report

Point Beach Nuclear Plant (PBNP) Technical Specification (TS) 5.6.6 states, "When a report is required by Condition B or F of LCO 3.3.3, 'Post Accident Monitoring (PAM) Instrumentation,' a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status."

On August 23, 2005, the second of two yellow bus powered channels of Core Exit Thermocouples (G-2 and E-4) PAM instrumentation became inoperable and was not restored within 30 days. Although the minimum required number of channels in each core quadrant continued to remain operable, the remaining operable channels in the affected core quadrant were white channels, which were powered from the same source. Consequently, a single failure could prevent operators from getting core exit temperature information from the affected core quadrant. Therefore NMC is conservatively submitting a report per Condition B of LCO 3.3.3 while the appropriateness of powering the two required channels from the same power supply is evaluated. The attachment to this letter contains the report of this condition.

This letter contains no new commitments and no revisions to existing commitments.

Please contact Gary Siegfried of my staff at 920-755-6297 with any questions.



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Enclosure

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PSCW

ENCLOSURE 1

POST ACCIDENT MONITORING INSTRUMENTATION REPORT TECHNICAL SPECIFICATION 5.6.6 POINT BEACH NUCLEAR PLANT, UNIT 1

Background

The primary purpose of the PAM instrumentation is to display unit variables that provide information required by the control room operators during accident situations. This information provides the necessary support for the operator to take the manual actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions for design basis accidents (DBAs).

The operability of the accident monitoring instrumentation ensures that there is sufficient information available on selected unit parameters to monitor and assess unit status and behavior following an accident. Point Beach Nuclear Plant (PBNP) Technical Specification (TS) LCO 3.3.3 requires two operable channels for most functions. Two operable channels ensure no single failure prevents operators from getting information necessary to determine the safety status of the unit, and to bring the unit to and maintain it in a safe condition following an accident.

Functions 19 through 22 of TS Table 3.3.3-1 are core exit temperature for the four reactor core quadrants. Core exit temperature is provided for verification and long term surveillance of core cooling.

An evaluation was made of the minimum number of valid Core Exit Thermocouples (CETs) necessary for measuring core cooling. The evaluation determined the reduced complement of CETs necessary to detect initial core recovery and trend the ensuing core heatup. Based on these evaluations, adequate core cooling is ensured with two valid core exit temperature channels per quadrant. Core exit temperature is used to control RCS pressure and temperature in the mitigation of a steam generator tube rupture (SGTR) event.

Two OPERABLE channels of core exit temperature are required in each quadrant to provide indication of radial distribution of the coolant temperature rise across representative regions of the core.

Condition Description

On March 28, 2005, Unit 1 CET E-4 failed. On August 23, 2005, a second Unit 1 CET in the same core quadrant, G-2, was declared inoperable when it failed low. Both E-4 and G-2 are powered from the yellow instrument bus. Although the minimum required number of channels in each core quadrant continue to remain operable, the remaining

operable channels in this core quadrant are powered from the same source, the white bus. Consequently, a single failure could prevent operators from obtaining core exit temperature information from the affected core quadrant. Based on the continued inoperability of these two channels of PAM instrumentation on September 22, 2005, NMC decided to conservatively report this situation per Condition B of LCO 3.3.3.

TS 5.6.6 states, "When a report is required by Condition B or F of LCO 3.3.3, 'Post Accident Monitoring (PAM) Instrumentation,' a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status."

Preplanned Alternate Method Of Monitoring

The remaining two CETs powered from the white instrument bus remain available to provide all required information for indication of radial distribution of the coolant temperature rise across representative regions of the associated core quadrant.

Cause Of The Inoperability

The cause of the inoperability is likely the thermocouple wiring connectors or the actual thermocouple elements. This cannot be conclusively determined until troubleshooting and repairs are made during the PBNP Unit 1 outage.

Plans And Schedule For Restoration

As part of the reactor vessel head replacement modification, the CET connectors at the head are planned to be replaced during the Unit 1 fall 2005 refueling outage (U1R29), which began on September 24, 2005. CET repairs are planned concurrent with this activity. The two yellow channels are scheduled for restoration prior to completion of the refueling outage.

Additional Plans

The appropriateness of powering the two required channels from the same power supply remains under evaluation. NMC plans to determine whether the individual CET channels need to address single failure concerns. The Technical Specification Bases would then be revised to reflect the appropriate information.