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Point Beach Nuclear Plant
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NRC 2002-0084

10 CFR 50.36

September 26, 2002

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Dockets 50-266 and 50-301
Point Beach Nuclear Plant, Units 1 and 2
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 G 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 September 16, 2002, inoperability of one channel of Reactor Coolant System Cold Leg Temperature (Wide Range) PAM instrumentation necessitated a report per Condition B of LCO 3.3.3. The attachment to this letter contains the required report of this condition.

This report contains no new commitments.

Please contact Jim Brander of my staff at 920-755-6432 with any questions.

T. H. Taylor
Plant Manager

JG/kmd

Attachment: PAM Instrumentation Report

cc: NRC Regional Administrator
NRC Resident Inspector
NRC Project Manager
PSCW

A001

POST ACCIDENT MONITORING INSTRUMENTATION REPORT

TECHNICAL SPECIFICATION 5.6.6

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

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 to 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 the information necessary for them to determine the safety status of the unit, and to bring the unit to and maintain it in a safe condition following an accident.

Function 3 of TS Table 3.3.3-1 is Reactor Coolant System (RCS) Hot and Cold Leg Temperatures (Wide Range). RCS Hot and Cold Leg Temperatures (Wide Range) are Category I variables provided for verification of core cooling and long term surveillance.

RCS hot and cold leg temperatures are used to determine RCS subcooling margin and verify adequate core cooling. RCS subcooling margin will allow termination of safety injection (SI), if still in progress, or reinitiation of SI if it has been stopped. RCS subcooling margin is also used for unit stabilization and cooldown control.

In addition, RCS cold leg temperature is used in conjunction with RCS hot leg temperature to verify the unit conditions necessary to establish natural circulation in the RCS.

Temperature inputs are provided by two independent temperature resistance elements and associated transmitters in each loop. The channels provide indication over a range of 50° F to 750° F.

Condition Description

On August 17, 2002, Unit 2 "A" cold leg wide range temperature indicator 2TI-450C was declared inoperable due to erratic signals being provided from its associated sensing element (2TE-450C). Troubleshooting and repair attempts were unsuccessful in restoring the indicator to service. On September 16, 2002, continued inoperability of this channel of PAM instrumentation necessitated a report per Condition B of LCO 3.3.3.

TS 5.6.6 states, "When a report is required by Condition B or G 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

Temperature elements 2TE-450A and 2TE-450C (and their associated instrument loops) are the two channels designated to meet the requirements of function 3 of TS Table 3.3.3-1 for "A" RCS

cold leg temperature (wide range) monitoring. 2TE-450A and its associated instrument loop remains operable and will continue to be used to monitor "A" RCS cold leg temperature (wide range). "A" RCS hot leg, "B" hot and cold leg temperature (wide range) indicators and core exit thermal couples will also be used to determine RCS subcooling margin and verify adequate core cooling.

Cause Of The Inoperability

Indicator 2TI-450C was observed reading high. Observation of the meter confirmed that the indicator was trending upward.

A review of the plant process computer system (PPCS) trend indicates 2TI-450C continues to fluctuate between 2° – 40° F higher than 2TI-450A with an occasional spike off scale.

The inoperability is believed due to degradation of the sensing element. Troubleshooting efforts indicate that it is unlikely that the problem is a result of a faulty E/I converter, cabling or containment splices.

Plans And Schedule For Restoration

A work order has been added to the Unit 2 Forced outage list for Mode 3, 4, 5 or 6. If a forced outage with the required plant conditions does not occur before the next Unit 2 refueling outage (U2R26 – scheduled for September 2003), restoration of this indicator would be performed during that refueling outage.

Additional Plans

1) Continue to investigate other alternative methods of monitoring loop temperature in the event 2TE-450A fails.
2) Replace the dual element RTD containing 2TE-450A and 450C at the next opportunity.
3) During the replacement of 2TE-450A and 450C, connect a decade box to the cables at the point where the cables were determed, and inject a controlled signal through the entire cable (including all splices) and verify the PPCS indications are reading accurate and are stable.
4) Prepare a contingency work plan to inspect and repair the penetration connections if the PPCS indications are inaccurate or unstable.
5) Prepare an additional contingency work plan to replace cables if repairing the splices does not correct the issue.
6) Recalibrate the respective instrument loops after replacement and repairs.