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DominionSM

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U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
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DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3
SPECIAL REPORT ON NUMBER OF OPERABLE CONTAINMENT HIGH RANGE
AREA MONITORS

In accordance with the reporting requirements of the Millstone Power Station Unit 3 (MPS3) Technical Specifications (TS), Section 3.3.3.6, ACTION 'c', Table 3.3-10, Dominion Nuclear Connecticut, Inc. (DNC) hereby submits a Special Report for the number of operable containment area-high range radiation monitor channels less than required by either the total or Minimum Channels OPERABLE requirements. The TS states, "Either restore the inoperable channel(s) to OPERABLE status within 7 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days that provides actions taken, cause of the inoperability, and the plans and schedule for restoring the channels to OPERABLE status."

On September 6, 2006, Containment High Range Area Monitors (CHRM) 3RMS*RE04A & 05A were declared inoperable due to a reliability concern associated with the potential for temperature induced currents (TIC) to cause erroneous readings during postulated accident scenarios. Condition Report CR-06-08181 documents this issue. These area monitors are used to estimate the extent of core damage following an accident. They are not used to initiate any accident mitigation functions.

Background

In 2001, DNC completed an evaluation of Millstone station radiation monitors susceptibility to TIC using the methods defined in the EPRI report TR 112582: "High Range Radiation Monitor Cable Study: Phase II," published in May 2000. The evaluation concluded that the affect of TIC is limited to the Millstone Unit 3 (MPS3) CHRM, however the affects are only significant for the very short period (two to three minutes) of time when extreme temperature changes occur in containment. For the accidents considered, these changes coincide with the periods immediately following the accident with the affect of TIC being substantially reduced as temperatures in containment stabilize. While low levels of TIC will potentially exist for longer periods of time, this effect would have a negligible affect on the monitor's ability to detect and indicate radiation levels in the range of interest.

The impact of TIC on the reliability of the MP3 CHRMs and the continued use of the CHRMs for post accident core damage assessments was also examined in the 2001

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evaluation. At that time it was determined that the ability to assess core damage would not be impacted given the relatively short duration of the transient. The significant thermal transient occurs at the beginning of the event such that the monitor will be indicating correctly by the time the operator is required to respond to the CHRMs. Although informally evaluated, no communication to the Operations staff on the TIC phenomenon or its implications to operability of the CHRMs occurred until 2006. The issue and underlying cause of this delay will be addressed in CR-06-08181 and CR-06-08340.

Current Status

Radiation Monitors 3RMS*RE04A & 05A have been declared inoperable but available. Consistent with the requirements of TS 3.3.3.6, ACTION 'c', an alternate means of monitoring containment radiation levels following an accident has been established.

Per Millstone Operations Procedure SP 3673.6, Radiation Monitors 3RMS*RE41 and 3RMS*RE42, fuel drop radiation monitors are the primary alternate indication for accident monitoring. These monitors are safety related and seismically qualified. The cables for these monitors are similar to cables evaluated in EPRI technical report TR-112582 and are significantly less susceptible to thermally induced current than the cables used for 3RMS*RE04A & 05A.

Procedure SP 3673.6 was revised to add direction to use 3MSS-RE76 or 3MSS-RE77 (Ion chamber Steam Line Monitors located outside containment) as a backup to 3RMS*RE41 or 3RMS*RE42 if needed. This procedure also provides direction to collect a reactor coolant system (RCS) sample if the listed radiation monitors are not available. These methods were already prescribed in procedure MP-26-EPI-FAP11: "Core Damage Assessment".

Aside from these deficiencies, 3RMS*RE04A & 05A are expected to function properly and indicate correctly during and after an event. An Operations' Night Order has been issued regarding SP 3673.6 to identify the alternate indication to be used while 3RMS*RE04A & 05A are inoperable. 3RMS*RE04A & 05A are available to confirm these alternate indications.

Proposed Actions

DNC is currently evaluating options to restore operability of radiation monitors 3RMS*RE04A & 05A including, but not limited to, further analysis, procedure enhancements, Operator training, cable/hardware replacement, and detector relocation.


External Operating Experience (OE) is being utilized in this evaluation. It is expected that a final corrective action recommendation will be made prior to the Spring 2007 scheduled refueling outage (3R11). If hardware modifications are required, the first

available outage to perform construction walkdowns would be 3R11. Depending on component/equipment lead-time, implementation of any modifications would follow.

The actions associated with the repair of Containment High Range Area Monitors 3RMS*RE04A & 05A are being tracked by DNC's corrective action program.

If you have any questions or require additional information, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,



J. Alan Price
Site Vice President - Millstone

Attachments: None

Commitments made in this letter: None.

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