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Point Beach Nuclear Plant, Units 1 and 2
Dockets 50-266 and 50-301
License Nos. DPR-24 and DPR-27

Supplement to 60-Day Response to Bulletin 2003-01, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized-Water Reactors"

On June 9, 2003, the Nuclear Regulatory Commission (NRC) transmitted Bulletin (BL) 2003-01. By letter dated August 8, 2003, Nuclear Management Company, LLC, (NMC) provided the 60-day response for the Point Beach Nuclear Plant. In that response, the following commitment was made:

NMC will submit an implementation schedule for revising plant emergency operating procedures, where appropriate, to stop or throttle redundant pumps that are not necessary to provide required flows to cool containment and the reactor core within 30 days of the issuance of the generic guidance by Westinghouse Owners Group, currently expected by March 31, 2004.

On April 16, 2004, the Westinghouse Owners Group (WOG) formally transmitted WCAP-16204, Revision 1, "Engineering Evaluation and Analysis Report, Evaluation of Potential ERG and EPG Changes to Address NRC Bulletin 2003-01 Recommendations". In the WCAP, the WOG evaluated 11 Candidate Operator Actions (COAs).

Enclosure 1 provides the NMC response to each of the COAs and the implementation schedule for the Point Beach Nuclear Plant. The implementation dates are contingent upon determining if prior NRC approval is required for any design or licensing basis changes. If prior NRC approval is required, the implementation date will be revised accordingly. This submittal fulfills the above commitment.

Summary of Commitments

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

1. NMC will implement the following Candidate Operator Action by April 30, 2005, at the Point Beach Nuclear Plant:

COA #7 Provide more aggressive cooldown and depressurization following a small break LOCA

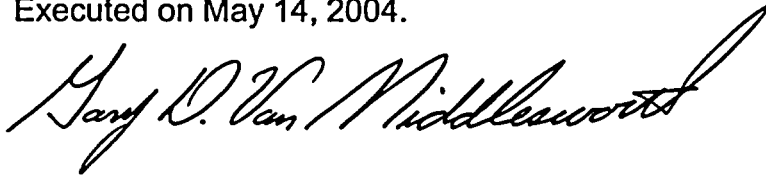
2. NMC will implement the following Candidate Operator Actions by July 15, 2005, at the Point Beach Nuclear Plant:

COA #5 Refill refueling water storage tank

COA #8 Provide guidance on symptoms and identification of containment sump blockage

COA #9 Develop contingency actions in response to: containment sump blockage, loss of suction, and cavitation

I declare under penalty of perjury that the foregoing is true and correct.
Executed on May 14, 2004.



Gary D. Van Middlesworth
Site Vice-President, Point Beach Nuclear Plant
Nuclear Management Company, LLC

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC

ENCLOSURE 1
SUPPLEMENT TO 60-DAY RESPONSE TO BULLETIN 2003-01,
“POTENTIAL IMPACT OF DEBRIS BLOCKAGE ON EMERGENCY SUMP
RECIRCULATION AT PRESSURIZED-WATER REACTORS”

Introduction

On April 16, 2004, the Westinghouse Owners Group (WOG) formally transmitted WCAP-16204, Revision 1, “Engineering Evaluation and Analysis Report, Evaluation of Potential ERG and EPG Changes to Address NRC Bulletin 2003-01 Recommendations”. The WCAP provides an evaluation of potential changes to the Emergency Response Guideline (ERG) and the Emergency Procedure Guideline (EPG) as required by the Nuclear Regulatory Commission (NRC) Bulletin (BL) 2003-01, “Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized-Water Reactors.”

In the WCAP, the WOG evaluated 11 Candidate Operator Actions (COAs). This enclosure addresses each of the 11 COAs. Information provided for each COA includes: the intent and strategy of the COA, whether the COA will or will not be implemented at the Point Beach Nuclear Plant, the bases for implementing or not implementing the COA, and the appropriate implementation schedule for the COA.

WOG Recommended Candidate Operator Actions

COA #1 Secure one containment spray pump before recirculation alignment

The intent of this COA is to reduce the flow rate to the sump when containment recirculation begins, to reduce the pressure differential across the sump screens if there is a buildup of debris, and to provide a modest time delay to the start of containment recirculation during a small break loss of coolant accident (SBLOCA).

The overall strategy of this COA is to secure one or both containment spray pumps during the injection phase of the accident mitigation, based on containment pressure and other considerations such as radiation levels and sump pH.

As discussed in the response to Bulletin 2003-01, Point Beach Emergency Operating Procedures (EOPs) secure one train of containment spray during the verification of automatic action steps in EOP-0, Reactor Trip Or Safety Injection. This arrangement of the EOPs was intended to aid in refueling water storage tank (RWST) conservation while aligning for sump recirculation. This also reduces the rate of transport of debris to the sump and maximizes the amount of debris that settles out of suspension before reaching the sump screens.

Therefore, NMC has implemented procedural guidance at Point Beach that satisfies COA #1. No further actions are required.

Implementation Date: Complete

COA #2 Manually initiate one train of containment sump recirculation earlier

The intent of this action is to start containment sump recirculation while usable inventory remains available in the RWST and stop suction from the RWST to preserve this volume of water and maintain one train of injection and spray pumps as a backup source.

Based on acceptable conditions, the overall strategy of this action is to manually transfer the suction of one safety injection train to the containment sump prior to automatic transfer to recirculation.

As discussed in the response to Bulletin 2003-01, the existing EOP network at Point Beach already minimizes the number of operating pumps during preparations to switch to sump recirculation. This was completed several years ago to prolong RWST inventory for containment spray and to ensure sufficient time available to perform all manual valve repositioning necessary to support containment sump recirculation.

It was deemed that this action does not provide clear benefit. Therefore, NMC will not be implementing COA #2 at the Point Beach Nuclear Plant.

Implementation Date: Not Applicable

COA #3 Terminate one train of HPSI/high-head injection after recirculation alignment

The intent of this COA is to reduce the total flow through the sump screens to reduce the rate of debris transport and reduce the risk of screen blockage, to reduce the risk of screen failure due to structural loading, to preserve one train of safety injection by not subjecting it to damage by debris ingestion or loss of NPSH and to preserve one sump screen enclosure (applicability based on plant design).

The overall strategy of this COA is to secure one train of emergency core cooling system (ECCS) after both trains have been aligned for recirculation, based on acceptable conditions.

NMC currently implements this strategy and meets the intent of this COA at Point Beach. When the criteria is met to align safety systems for containment sump recirculation, the Point Beach EOPs secure one ECCS

train, align for sump recirculation, and then initiate sump recirculation with one ECCS train at 34% RWST level. The other ECCS train is left in standby.

NMC has implemented procedural guidance that satisfies COA #3. No further actions are required.

Implementation Date: Complete

COA #4 Terminate LPSI/RHR pump prior to recirculation alignment

WCAP-16204, Revision 1, indicates COA #4 was evaluated for Combustion Engineering designed plants. The intent of this COA is to delay Emergency Core Cooling System (ECCS) suction switchover from the RWST to containment sump suction mode.

This COA is not applicable to Westinghouse pressurized water reactor plants operated by NMC.

Implementation Date: Not Applicable

COA #5 Refill refueling water storage tank

The intent of this COA is to provide inventory for re-establishing RCS injection and containment spray (if necessary) in the event the containment sump source is not available.

The overall strategy is to refill the RWST following initiation of recirculation, or line up an alternate makeup source bypassing the RWST, in anticipation of possible sump blockage.

NMC will implement this strategy at Point Beach by providing instructions in the EOPs to refill the RWST from normal or alternate water sources.

Implementation Date: July 15, 2005

COA #6 Inject more than one RWST volume from refilled/diluted RWST or by bypassing RWST

The intent of this COA is to provide procedures for re-establishing injection to the RCS from either the refilled RWST or alternate makeup source.

The overall strategy is to secure recirculation and align equipment to re-establish injection from a refilled RWST or from an alternate source bypassing the RWST.

NMC has evaluated this strategy for Point Beach but has determined that this is not risk beneficial due to concerns including dilution of boron and maintaining pH. Point Beach is unusual in its use of NaOH to retain iodines in solution. While a sufficiently high pH is currently maintained under limiting scenarios, further dilution may cause a problem. Keeping boron concentration high enough to meet subcriticality analysis assumptions may also be difficult.

There also is no particularly fast or efficient means of transferring (or making) a large quantity of water to replenish a depleted RWST. When containment is fully flooded (i.e. one complete RWST), the level is right at the bottom of the lower reactor vessel head. This is different from most other plants and would require an evaluation for any problems with thermally stressing the vessel by direct immersion.

Therefore, NMC will not be implementing COA #6 at Point Beach.

Implementation Date: Not applicable

COA #7 Provide more aggressive cooldown and depressurization following a small break LOCA

The intent of this COA is to limit inventory loss during a small break LOCA by performing a rapid cooldown of the RCS. Performing a rapid cooldown may allow the operators to establish RHR shutdown cooling in lieu of aligning for containment sump recirculation.

The overall strategy is to cooldown the plant as rapidly as possible, but within Technical Specification limits, and if possible, establish RHR shutdown cooling.

Subsequent to aligning for sump recirculation following a loss of coolant accident, the operators will transition to EOP 1.2, Small Break LOCA Cooldown And Depressurization. Current direction in EOP 1.2 allows cooldown at up to 100°F per hour, the maximum allowable cooldown rate in Technical Specifications.

NMC will strengthen the background document information for the applicable procedure steps to include an emphasis of aggressive cooldown and depressurization within Technical Specification limits.

Implementation Date: April 30, 2005

COA #8 Provide guidance on symptoms and identification of containment sump blockage

The intent of this COA is to provide procedural guidance on recognition of sump clogging. This COA is applicable to Westinghouse plants.

The overall strategy is to continuously monitor system parameters for early detection of sump blockage.

NMC will implement this strategy at Point Beach by adding a continuous action step immediately after establishing sump recirculation to check indications of sump blockage and transition to the new sump blockage procedure, ECA-1.3, if blockage is indicated.

This new continuous action step will be in addition to existing guidance for monitoring long-term containment sump performance. The purpose of adding the new continuous action step immediately after establishing containment sump recirculation is to check for sump blockage immediately following containment sump recirculation.

Implementation Date: July 15, 2005

COA #9 Develop contingency actions in response to: containment sump blockage, loss of suction, and cavitation

The intent of this COA is to provide guidance to respond to indications of sump blockage, loss of pump suction and pump cavitation.

The overall strategy is to reduce recirculation flow, as allowed, to minimize head loss across the clogged screen and re-establish injection if recirculation flow is lost.

The WOG has developed a generic guideline to respond to containment sump screen blockage that prevents establishing or maintaining at least one train of ECCS flow during recirculation mode (Sump Blockage Control Room Guidance, or SBCRG).

NMC will implement the new WOG SBCRG into the Point Beach EOP procedure network. A new procedure, ECA-1.3, will be developed and implemented at PBNP. The new procedure will be developed using the generic guidance in the WOG SBCRG.

Implementation Date: July 15, 2005

COA #10 Terminate HPSI/high-head injection prior to recirculation alignment

WCAP-16204, Revision 1, indicates COA #10 was evaluated for Combustion Engineering designed plants. The intent of this action was to delay the recirculation actuation signal (RAS).

The strategy to accomplish this action includes securing one HPSI pump prior to RAS by revising the HPSI stop/throttle criteria.

Based on the WOG analysis presented in WCAP-16204, securing one LPSI/RHR pump during the injection phase prior to recirculation was deemed not risk beneficial due to the risk of core damage for potential single failure consideration. Therefore, NMC will not be implementing COA #10 at Point Beach.

Implementation Date: Not Applicable

COA #11 Delay containment spray actuation for small break LOCA in ice condenser plants

WCAP-16204, Revision 1, indicates COA #11 was evaluated for ice condenser plants. The intent of this action is to prevent or delay containment spray for small break LOCAs less than one inch diameter.

This COA is not applicable to pressurized water reactor plants operated by the Nuclear Management Company, LLC (NMC).

Implementation Date: Not Applicable

Conclusion

NMC has addressed each of the eleven COAs from WCAP-16204, Revision 1. These COAs are interim measures while NMC conducts evaluations to verify compliance with applicable regulatory requirements. These interim measures, as well as the compensatory measures addressed in the response to Bulletin 2003-01, will be reevaluated during NMC's response to the upcoming Generic Letter on this issue.