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10 CFR 50.90

U.S. Nuclear Regulatory Commission
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Kewaunee Nuclear Power Plant
Docket 50-305
License No. DPR-43

Supplement to License Amendment Request 216 To The Kewaunee Nuclear Power Plant Technical Specifications: Containment Cooling System Suction Flow Path

On June 16, 2005, Nuclear Management Company, LLC (NMC) submitted a license amendment request (LAR) titled, "License Amendment Request 216 To The Kewaunee Nuclear Power Plant Technical Specifications: Containment Cooling System Suction Flow Path." LAR 216 proposed Technical Specification (TS) changes to modify the containment spray pump suction flow path requirements. This supplement to LAR 216 requests review and approval of this submittal under the rules of 10 CFR Part 50, Section 50.91(a)(5) where emergency circumstances exist.

Kewaunee Nuclear Power Plant (KNPP) has been shutdown since February 2005. Subsequent to submitting LAR 216, NMC determined that the TS change proposed in this LAR is the single remaining issue to be resolved prior to plant restart. Since resolution of this issue is preventing resumption of plant operations, an emergency situation exists pursuant to the provisions of 10 CFR 50.91(a)(5).

Basis for Emergency LAR

Regulation 10 CFR 50.91 requires that an emergency LAR address why the emergency situation occurred and why the situation could not be avoided. The current TS requires containment spray pump suction flow paths from the containment sump for system operability. By design, this flow path is through the residual heat removal (RHR) pumps which provide suction flow to the containment spray pumps during the post loss-of-coolant accident (LOCA) recirculation phase.

The KNPP staff has recognized since early operation of the plant that operation of the containment spray pumps while taking suction from the RHR pumps could potentially cause an RHR pump runout condition that could result in damage to the RHR pumps. The plant staff addressed the potential for RHR pump runout under these postulated conditions by including procedure steps to address the condition in the procedure for manual switching to the recirculation mode.

NMC did not recognize until May 2005 that non-safety related flow control valves could not be credited to prevent RHR pump runout if the containment spray system is operated during the post LOCA recirculation phase. This condition would occur if the ability to throttle the RHR injection flow with the RHR Heat Exchanger Flow Control Valves (RHR-8A/B) was lost. The RHR-8A/B valves have a non-safety related (Class II) control system and are designed to fail open. Equipment with non-safety related components should not be credited to assure operability of safety related (Class I) Engineered Safety Features (ESF) components.

NMC promptly initiated resolution of this issue through engineering evaluations and review of the containment spray system design basis. As discussed in Sections 3.0 and 4.0 of LAR 216, Enclosure 1, these evaluations and reviews established that containment spray is not credited during the post LOCA recirculation phase of accident recovery. Since containment spray is not credited during the recirculation phase, NMC concluded administrative control of the containment spray pumps provided a satisfactory solution.

The resolution of this issue was discussed with the NRC resident inspectors in early June 2005. Following these discussions, NMC determined that administrative controls will protect the RHR pumps from runout, but the plant would not be in verbatim compliance with TS 3.3.c.1.A.1.(ii) (i.e., capable of taking a suction from the containment sump). On June 10, 2005, NMC identified three actions that would bring this issue to an acceptable resolution: (1) demonstrate by engineering evaluation that the RHR pump will not runout with RHR-8A/B failed open and containment spray taking suction from RHR, (2) implement a modification to upgrade the RHR-8A/B valve controls, or (3) remove the operability requirement for a containment sump flow path from TS 3.3.c.1A.1.(ii).

Engineering could not provide a satisfactory evaluation that the RHR pump would not runout (action 1); and thus, on June 11, 2005, NMC initiated a TS Change Request while continuing evaluation of modifications to resolve this issue. A modification to the RHR flow control valve controls (action 2) would require at least eight weeks.

Regulatory Analysis

10 CFR 50.91(a)(5) states in part,

Where the Commission finds that an emergency situation exists, in that failure to act in a timely way would result in derating or shutdown of a nuclear power plant, or in prevention of either resumption of operation or of increase in power output up to the plant's licensed power level, it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment.

The TS change proposed in this LAR is the single issue that is preventing restart of the plant. Thus, this LAR must be approved by June 21, 2005 or KNPP will be prevented from resumption of operation. NMC has evaluated this proposed change in accordance with 10 CFR 50.92 and concluded that it involves no significant hazards consideration as described in LAR 216. 10 CFR 50.91(a)(5) specifically allows the NRC to issue the proposed LAR under these conditions.

10 CFR 50.91(a)(5) also states,

The Commission expects its licensees to apply for license amendments in timely fashion. It will decline to dispense with notice and comment on the determination of no significant hazards consideration if it determines that the licensee has abused the emergency provision by failing to make timely application for the amendment and thus itself creating the emergency. Whenever an emergency situation exists, a licensee requesting an amendment must explain why this emergency situation occurred and why it could not avoid this situation.

NMC determined in May 2005 that non-safety related flow control valves are required to prevent RHR pump damage if the containment spray system is operated during the post LOCA recirculation phase. Following this determination, NMC expeditiously pursued resolution of this issue.

On June 10, 2005, the NMC concluded that resolution of this issue requires an LAR to remove the TS requirement for containment spray pump suction flow paths from the containment sump. KNPP submitted LAR 216 on June 16, 2005, to address this issue. Subsequently, the NMC resolved other issues preventing plant startup and the TS change proposed in this LAR is the only remaining issue preventing plant startup.

When NMC submitted LAR 216, there was one issue that NMC had not determined the length of time required for resolution. This issue dealt with some cinder block walls and their integrity during a design basis tornado. These potential resolutions included: (1) completion of design changes to ensure wall integrity, (2) perform a more detailed analysis of the wall loading to confirm

integrity, (3) install design changes to provide a vent to prevent a pressure differential across the wall, or (4) provide compensatory measures by opening or unlatching doors to prevent a pressure differential across the wall under unfavorable weather conditions. NMC has determined the integrity of the cinder block walls in question can be ensured by compensatory measures until design changes are complete, which provide a vent that prevents a pressure differential from developing across the walls sufficient to cause the block walls to fail.

Thus, NMC has applied for this LAR in a timely fashion, has not abused the emergency provisions, and has not itself created an emergency.

The Nuclear Management Company, LLC, concludes that the requirements and tests of 10 CFR 50.91(a)(5) have been met and this LAR should be considered as an emergency license amendment.


NMC requests approval of this proposed amendment by June 21, 2005, to support restart of KNPP. The license amendment will be implemented upon approval.

The proposed changes in this supplement do not impact the conclusions of the Determination of No Significant Hazards Consideration and Environmental Assessment presented in the original June 16, 2005, submittal. In accordance with 10 CFR 50.91, NMC is notifying the State of Wisconsin of this LAR by transmitting a copy of this letter to the designated state official.

Summary of Commitments

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

I declare under penalty of perjury that the foregoing is true and correct.
Executed on June 19, 2005.



Michael G. Gaffney
Site Vice President, Kewaunee Nuclear Power Plant
Nuclear Management Company

cc: Administrator, Region III, USNRC
Senior Resident Inspector, Kewaunee, USNRC
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