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Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Subject: Notification of Close-out of a Potentially Reportable Condition

Reference: Letter, R.C. Mitchell to NRC Document Control Desk, MFN-199-92,  
dated November 24, 1992

In a telephone call on November 24, 1992 to Greg Cwalina of the NRC, GE Nuclear Energy provided the NRC an interim notification of an in-process 10 CFR Part 21 evaluation. The concern evaluated was the potential for damage to the High Pressure Coolant Injection (HPCI) turbine exhaust line resulting from a HPCI turbine start with the turbine casing filled or partially filled with water. This letter provides closure of that issue.

The concern is a postulated scenario where HPCI is initiated on high drywell pressure and subsequently trips on high reactor water level (L8). Since the barometric condenser drain pump is non-safety-related, credit is not taken for its operability. The steam admission valve E41-F001 cannot be closed for this event. Due to system interlocks, the cooling water valve E41-F059 also remains open. The HPCI turbine and a portion of the exhaust line subsequently fill with water from the condensate storage tank. If the HPCI turbine were signalled to restart on low reactor water level (L2), the potential for damage to the turbine exhaust line and/or rupture of the primary containment pressure boundary (where the HPCI turbine exhaust line returns to the suppression chamber) is postulated.

GE Nuclear Energy performed an analysis to determine if the flooding of the HPCI turbine casing and adjacent exhaust line would have the potential to cause a loss of primary containment integrity during turbine restart. The analysis was performed for a plant piping and containment configuration considered representative of a typical BWR. This analysis indicated that the forces imposed on the HPCI turbine exhaust line containment penetration headfitting and interfacing piping due to waterhammer events resulting from starting a flooded turbine were not of sufficient magnitude to fail the primary containment pressure boundary. However, the analysis did indicate the possible overloading of two pipe support snubbers in the vicinity of the turbine flange, which would most likely fail the snubbers and cause limited pipe deformation.

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As a result of this analysis, GE-NE has concluded that the described HPCI system operating scenario does not represent a significant safety hazard and that the event is not a Reportable Condition.

While this potential event is limited to five U.S. plants with this HPCI configuration, all GENE BWR plants were given the interim notification. All GENE BWR plants will also be given a closure report for this evaluation.

Very truly yours,



R.C. Mitchell  
Manager, Safety and Communications  
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cc: G. C. Cwalina (NRC-NRR/RVIB)  
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PRC File