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6710-97-2283

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

Gentlemen:

Subject: Three Mile Island Nuclear Station, Unit I (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
GPU Nuclear Response to Inspection Report 96-201

By letter dated June 23, 1997, we transmitted the GPU Nuclear response to Inspection Report (IR) 96-201. The purpose of this letter is to amend that response to revise the planned corrective action for URI 96-201-14, "Adequacy of Safety Evaluation of FSAR Change (Section E.1.3.2.2.b). Namely, GPU Nuclear intends to modify operating procedures to restore conformance to the licensing basis rather than propose changes to the licensing basis as described in the June 23, 1997 response.

If you have any questions on this amended response, please contact us.

Sincerely,

R. W. Keaten
Vice President & Director
Engineering

WGH

Attachment

cc: Administrator, Region I
TMI Senior Resident Inspector
TMI Senior Project Manager

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URI 96-201-14, "Adequacy of Safety Evaluation of an FSAR Change (Section E.1.3.2.2 b)"

A. Description of the Finding:

Safety Evaluation (SE) No. 115403-004, Rev. 0, did not identify that, because the required Net Positive Suction Head (NPSH) for the Decay Heat Removal (DHR) Pumps would not be met without taking credit for containment overpressure, the probability of occurrence of malfunction of the DHR Pumps previously evaluated in the safety analysis report may be increased, and thus, a potential Unreviewed Safety Question (USQ) as defined in 10CFR50.59 was involved.

B. Discussion:

Safety Evaluation SE-115403-004, Rev. 0, considered that the assumption of no credit for containment overpressure above the sump vapor pressure only applied to the licensing basis accident analysis condition of 3000 gpm Low Pressure Injection (LPI) flow rate and 1500 gpm RB Spray flow rate, and adequate NPSH was demonstrated at these conditions. A flow rate limited to 3300 gpm by Abnormal Transient Procedure (ATP) 1210-7, "Large Break LOCA Cooldown," was considered to be beyond the licensing basis as presently defined by the TMI-1 FSAR and the NRC Safety Evaluation Report (SER) dated July 11, 1973 for TMI-1. Since this condition was interpreted as being beyond the licensing basis, it was determined that use of conservative but more realistic assumptions in terms of containment overpressure was acceptable.

The existing licensing basis only addresses the accident analysis assumed LPI flow rate of 3000 gpm. Safety Evaluation 115403-004, Revision 0, recognized that ATP 1210-7 allowed a higher LPI flow rate. This higher LPI flow rate provides additional margin beyond the accident analysis value in terms of core cooling (10 CFR 50.46) concerns. The value used for the assumption on containment overpressure was conservative but reflected an expected Reactor Building response to the postulated design basis accident. Safety Evaluation 115403-004, Revision 0, determined the NPSH available to the DHR Pumps to be adequate at both the 3000 gpm accident analysis value and the 3300 gpm procedurally limited flow value. The calculated NPSH available for the DHR Pumps at conditions of 3300 gpm LPI and 1500 gpm RB Spray flow was approximately 0.5 ft. (0.22 psi) less than required with no credit for containment overpressure based on a 1990 calculation and the associated safety evaluation. Abnormal Transient Procedure (ATP) 1210-07, "Large Break LOCA Cooldown," directs the operator to turn off the RB Spray Pumps at a RB Pressure of 4.0 psig. Under this condition there is an excess available NPSH of 2.9 ft. Thus, additional NPSH margin is provided when considering the expected plant and operator response to the postulated design basis accident. No immediate corrective actions were required since this condition only involves a reduction in the margin included in the NPSH determination and does not represent a safety or operability issue.

While applying containment overpressure could legitimately be viewed as a design control concern under Appendix B to 10 CFR 50, at the preliminary enforcement conference on May 22, 1997, GPU Nuclear questioned whether SE No. 115403-004, Revision 0, should have determined that an unreviewed safety question existed by considering assumptions beyond the licensing basis. Safety Evaluation 115403-004, Revision 0, explicitly documented the rationale substantiating the safety evaluation conclusions, and conservatively incorporated instrument error not previously considered in the licensing basis. GPU Nuclear requested further consideration and guidance from the NRC Staff on this question. We suggested that safety evaluations should be performed in a manner consistent with licensing basis assumptions because the objective of those evaluations is to determine whether a change preserves the plant's licensing basis. Based on additional discussion with NRC Staff, GPU Nuclear understands that it is the NRC's position that use of containment overpressure for the 3300 gpm LPI flow rate is a deviation from the existing licensing basis. GPU Nuclear understands that 10CFR50.59 and USQ criteria interpretation is an evolving issue and is continuing to develop based on issuance of NRC document, SECY 97-035. We are participating in various industry groups related to this issue and continue to monitor these activities to fully understand how to more effectively address 10 CFR 50.59 criteria.

Accordingly, GPU Nuclear will establish and implement corrective actions which will ensure the LPI pumps would have adequate NPSH available consistent with the existing licensing basis requirement of no credit for containment overpressure other than the assumption of containment pressure equal to the vapor pressure of the sump water, as approved by NRC in Safety Evaluation Report dated July 11, 1973. These corrective actions will restore compliance with the existing licensing basis.

C. Corrective Actions:

GPU Nuclear is proceeding to implement revisions to Abnormal Transient Procedure (ATP) 1210-07, "Large Break LOCA Cooldown", to limit LPI and BS flow rates where necessary to ensure that these pumps are operated under conditions where adequate NPSH is available without credit for containment overpressure. Evaluations supporting this procedure change will ensure that system safety functions and associated licensing basis requirements are maintained.

This corrective action will restore the existing licensing basis and eliminate any potential for a USQ that may exist as a result of the revised profile evaluated in Safety Evaluation 115403-004, Revision 0.

D. Schedule for Completion of Corrective Actions:

The revisions to Procedure ATP 1210-07 and the supporting safety evaluation are being completed to support start-up from the present outage. Associated changes to engineering and design documentation will be completed by July 31, 1997.