



December 7, 1990

W. T. Cottle

Vice President
Operations
Grand Gulf Nuclear Station

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attention: Document Control Desk

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Revisions to Technical Specification
Per Generic Letter 88-01
AECM-90/0198

By letter dated October 1, 1990, the NRC transmitted its Safety Evaluation and associated Technical Evaluation Report of Grand Gulf Nuclear Station's response to Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping". The October 1, 1990 letter indicated that Grand Gulf had acceptably implemented the technical aspects of Generic Letter 88-01 by accepting the Staff's recommendations on IGSCC inspection, mitigation and other aspects of IGSCC detection by incorporating necessary revisions into the GGNS Inservice Inspection (ISI) Program. These revisions included surveillance frequencies for welds, reporting requirements for IGSCC flaws identified in the future, and related portions of the ISI Program.

In addition, the Safety Evaluation identified four licensing issues for which GGNS was requested to submit license amendments. Grand Gulf has reviewed these issues and each of these is presented in the attachment to this letter.

Based on GGNS's response to Generic Letter 88-01 and the Staff's Safety Evaluation, we continue to believe that the IGSCC inspection and mitigation program and the current GGNS Technical Specifications provide reasonable assurance of maintaining the long-term structural integrity of austenitic stainless steel piping in GGNS.

If you require additional information, please advise.

Yours truly,

JOF/WTC:mtc
Attachment

cc: See next page

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GGNS has reviewed the recommendations identified in the Staff's October 1, 1990 letter and provides the following response:

Item 1:

Include a statement in the surveillance or administrative controls section that includes the following: "The inservice inspection program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the NRC staff positions on schedule, methods, personnel, and sample expansion included in Generic Letter 88-01 or in accordance with alternate measures approved by the NRC Staff."

Response:

With its October 1, 1990 Letter and accompanying safety evaluation, the NRC appears to have inadvertently changed its most recent position on the applicability of the Commission's Technical Specification Policy Statement to new technical specification requirements. The following provides some background information which may be useful to clarify this situation.

Generic Letter 88-01, which was issued on January 25, 1988, was preceded by CRGR review. The CRGR review and the Generic Letter recognized that "... the Inservice Inspection and Testing sections may be removed from the Technical Specifications in the future in line with the Technical Specification Improvement programs." At the time Generic Letter 88-01 was issued, however, the Commission's Technical Specification Policy Statement had not been implemented by the Staff. Had the policy been in effect at that time, it is doubtful that the Generic Letter would have suggested the addition to the Technical Specifications of the above statement on ISI.

On March 30, 1988 (following issuance of Generic Letter 88-01), the Deputy Director of NRR issued a memorandum to Division Directors entitled "Implementation of the Commission Interim Policy Statement on Technical Specifications Improvement." This memorandum stated, in part:

In a Staff Requirements Memorandum dated February 17, 1988... the Commission directed the staff to "incorporate the guidance of the policy statement [on Technical Specifications Improvements] in the day-to-day conduct of technical specification development and reviews..."

Requirements should not be added to either the Standard Technical Specifications (STS) or individual plant Technical Specifications unless they are consistent with the Policy Statement criteria for determining which requirements should be included in Technical Specifications (basically commitments necessary to prevent or mitigate design basis accidents or transients). Requirements which do not meet the criteria should only be made Technical Specifications if (per the Policy Statement) they can be shown (in some rigorous fashion) to be "... constraints of prime importance in limiting the likelihood or severity of the accident sequences that

are commonly found to dominate risk." Licensee commitments and other staff-imposed constraints that do not satisfy the requirements of the Policy Statement should be controlled through some other vehicle (e.g. FSAR, plant procedures).

Project Managers should assure that new requirements are not added to licensees' Technical Specifications unless they are consistent with the Policy Statement...

This Staff position was reiterated on April 21, 1988 in a memorandum from the Director of the Division of Reactor Projects I/II to all Project Directorates and Project Managers in the Division of Reactor Projects I/II. This memorandum added the additional direction that "Technical Specification change requests currently for action should be reviewed using the guidance set forth..." in the February 17, 1988 and March 30, 1988 memoranda.

Because it was apparent that the later Staff positions above (i.e., the Technical Specification Improvement Program criteria) had superceded the Generic Letter 88-01 position concerning the new ISI statement in Technical Specifications, Grand Gulf responded (August 8, 1988) to the Generic Letter as follows:

Improvements in Technical Specifications by placing some actions in administratively controlled programs is a goal at GGNS. In keeping with this effort, SERI considers the appropriate location for commitments regarding conformance to staff positions on schedule, methods and personnel, and sample expansion to be the ISI program for GGNS. The ISI program is a formal program that is reviewed by the NRC and currently controls other commitments that augment ASME Section XI Inservice Examinations. The ISI Program for GGNS will be revised to incorporate the positions contained in this report.

Until receipt of the October 1, 1990 SER on Generic Letter 88-01, Grand Gulf was unaware of any change in Staff position, either as regards application of the Commission's Policy Statement to Technical Specification changes or plans to retain the ISI administrative controls (TS 4.0.5) in the improved Technical Specifications. Consequently, we assume that requiring a Technical Specification change in this instance was an inadvertent error and the Generic Letter 88-01 SER will be revised. If there is additional information of which we are unaware, please let us know.

Finally, it should be noted that regardless of whether such a statement is contained in Technical Specification, Grand Gulf intends that "the inservice inspection program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the NRC staff positions on schedule, methods, personnel and sample expansions included in Generic Letter 88-01 or in accordance with alternate measures approved by the NRC staff." To that end, GGNS has amended the ISI Program in accordance with the above commitment.

Item 2:

Change TS 3.4.3.2.e to specify that reactor coolant system leakage shall be limited to a 2 gpm increase in unidentified leakage within any 24 hour period.

Response:

GGNS has reviewed this proposed revision and has determined that the existing Technical Specification LCO (i.e., 2 gpm increase in unidentified leakage within any 4-hour period) is consistent with the BWR-6 Standard Technical Specifications and, in conjunction with other monitoring methods, provides an adequate level of monitoring for break detection. This position is consistent with the GGNS license basis in Section 5.2.5.1.1 of the GGNS UFSAR that indicates that the rate of increase of unidentified leakage is only one of the many parameters that operators monitor to detect leaks in the reactor coolant pressure boundary. Specifically, Section 5.2.5.1.1 reads: "Leaks within the drywell are detected by monitoring for abnormally high pressure and temperature within the drywell, high levels and fillup rates and long pump-out times of equipment and floor drain sumps, excessive temperature difference between the inlet and outlet cooling water for the drywell coolers, increased flow rate of the cooler condensate, a decrease in the reactor vessel water level, and high levels of fission products in the drywell atmosphere." Therefore, any change that would significantly increase the conservatism in any one of these parameters appears unwarranted, since the leakage detection objective is achieved by the cumulative effects of all of these detection mechanisms.

In addition, the current 2 gpm increase in 4 hours provides an adequate level of protection in anticipating and addressing leaks that may approach the GGNS design basis value of a total unidentified leakage of 5 gpm. As discussed in Section 5.2.5.5.3 of the GGNS UFSAR: "In every case, the leak rate from a crack of critical size is significantly greater than the 5-gpm criterion." In addition, this UFSAR Section also indicates that "... it is estimated that leak rates of hundreds of gpm will precede crack instability." These statements coupled with the "not to exceed" limit of 5 gpm total unidentified leakage support GGNS's position that a 2 gpm rate of unidentified leakage in 4 hours allows sufficient time for corrective action before the process barrier could be significantly compromised.

While the staff identified no quantifiable safety benefit associated with the proposed TS change, industry experience has shown that the mechanisms for leak detection (e.g., drywell entries, the cycling of valves, etc.) provide an adverse operational impact to the plant equipment and increased exposure for plant personnel. Since leaks of a 2 gpm per 24-hour magnitude are most likely caused by leaks from valve packing, pump seals or fittings, and the restart of systems (e.g., during start-up activities), an increase in the number of drywell entries required to identify the source of the leak is to be expected. This requires the plant to experience additional power increases and decreases to allow for drywell entries and results in additional exposure for plant personnel

conducting the drywell inspections. The benefit of identifying a leak of this size is not justified by the ALARA and equipment wear that could be realized.

GGNS's response to Generic Letter 88-01 provides additional substantiation as to the adequacy of the present Technical Specification. The response to Generic Letter 88-01 indicated that GGNS had developed a comprehensive program associated with all IGSCC susceptible welds addressed by the generic letter. In addition, no IGSCC-related flaws or cracks have been identified on the subject welds. This is complemented by the GGNS ISI Program which complies with Generic Letter 88-01 and is designed to detect IGSCC well in advance of critical crack size development. Therefore, the enhanced ISI Program should preclude the need for additional conservatism due to IGSCC in the operational criteria for leakage detection systems.

Finally, this proposed Technical Specification change was briefly discussed with the Grand Gulf Project Manager during a meeting on November 6, 1990. The Project Manager indicated that Grand Gulf had "skipped by" the process as regards this Technical Specification, implying that other BWRs had a similar specification. To the best of our knowledge, Grand Gulf is the only BWR-6 plant to have any Technical Specification on increased leakage and BWR-5 plants have the same Technical Specification as Grand Gulf.

Item 3:

Change the surveillance requirement in TS 4.4.3.2.1.b to specify that primary containment sump flow rate shall be monitored at least once per eight (8) hours.

Response:

GGNS considers the current 4 hour surveillance interval to be consistent with the current 4 hour "windows" specified in LCO 3.4.3.2.e and ACTION e. Therefore, GGNS will, for now, maintain a once per 4 hour frequency in Surveillance Step 4.4.3.2.1.b.

Item 4:

Change TS 3.4.3.1 to specify that the following actions shall be taken when the sump pump or the sump level and flow monitoring systems are determined to be inoperable. Since your plant has IGSCC weld Category D weldments, the Action Statement should provide an allowed outage time of 24 hours for repairing the drywell floor and equipment drain sump monitoring system, or an orderly shutdown should be initiated.

Response:

Due to Induction Heating Stress Improvement (IHSI) work completed in Refueling Outage 04, this Technical Specification revision is no longer warranted. All 34 Category D welds identified in Grand Gulf's response to Generic Letter 88-01 have been IHSI treated and will qualify as Category C welds.