



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

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U. S. Nuclear Regulatory Commission
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South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Clarification of Component Unavailability Considerations in PRA Applications

- Reference:
- 1) SECY-97-229, "Graded Quality Assurance/Probabilistic Risk Assessment Implementation Plan for the South Texas Project Electric Generating Station," dated October 6, 1997
 - 2) Letter, J. A. Zwolinski to W. T. Cottle, "South Texas Project Units 1 and 2 – Safety Evaluation on Exemption Requests from Special Treatment Requirements of 10CFR Parts 21, 50, and 100 (TAC Nos. MA6057 and MA6058)," dated August 3, 2001

South Texas Project (STP), as the industry's proto-type pilot for the 10CFR 50.69 effort, is implementing a methodology change when considering component unavailability in planned maintenance sensitivity studies. This methodology change does not alter the language in the Operations Quality Assurance Program (OQAP) or in UFSAR Section 13.7, nor do we believe the change impacts the intent of the basis for approval of the exemption from certain special treatment requirements. However, STP wishes to keep the NRC staff informed of lessons learned which add efficiency and robustness into the categorization process. Therefore, STP is not seeking NRC approval of this change, but is providing the change to the NRC for information.

The NRC approved the basis for revisions to the STP Operations Quality Assurance Program utilizing a risk-informed approach as stated in the Reference 1 safety evaluation report. In addition, STP was granted an exemption from certain special treatment requirements of 10CFR Parts 21, 50, and 100 as stated in Reference 2. The STP UFSAR contains commitments with respect to the exemption as well as allowances for making changes to UFSAR Section 13.7 without prior NRC approval.

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During recent data updates to the STP Probabilistic Risk Assessment (PRA) Model, STP identified that the methodology to address component unavailability in the PRA sensitivity study for planned maintenance is extremely conservative. While the planned maintenance sensitivity study is included as a part of the basis for the Graded Quality Assurance (GQA) Safety Evaluation Report (SER), the detail of how this sensitivity study is to be accomplished is not stated in the basis for the GQA SER or in the approved exemption from certain special treatment requirements. When the GQA SER was issued, the planned maintenance sensitivity study assumed the affected trains of components are unavailable for a full calendar year. The GQA SER specifically states in Section 3.2.2:

The licensee performed a variety of sensitivity studies to provide additional assurance that important SSCs are not inappropriately categorized because of PRA modeling limitations and uncertainties. Toward this end, the licensee's PSA Risk Ranking procedure (Reference 14) includes the following bounding values and analyses:

- equipment planned to be out of service during each of the plant's scheduled maintenance states is set to unavailable

In addition, UFSAR Section 13.7 addresses aggregate sensitivity studies, but does not specify a level of detail describing planned maintenance sensitivity studies.

To date, the STP implementing procedures have conservatively assumed for each planned maintenance sensitivity study that the affected trains/components are unavailable for a full year. This assumption is not considered realistic, results in unnecessary conservatism, and does not provide the needed insight to determine component importance. Since the GQA SER basis does not specify that affected trains/components in planned maintenance sensitivity studies must be considered unavailable for a full year, STP has modified its approach to consider affected trains/components as being unavailable for a more reasonable, yet bounding, period of time when performing planned maintenance sensitivity studies.

The STP planned maintenance sensitivity studies consist of approximately 16 different evaluations (different component out-of-service combinations for Trains A, B, and C; Train D Auxiliary Feedwater and Steam Generator PORV out of service; and three different 'no maintenance' states) which are performed one maintenance state at a time. Previously, each combination of components was assumed to be out-of-service for a full calendar year when performing the sensitivity studies. STP is now implementing a methodology which utilizes a more realistic, bounding analysis similar to the "Increase the Failure Rate of all Modeled LSS Components by a Factor of 10" sensitivity study which the NRC approved with the STP exemption from certain special treatment requirements (Reference 2). Specifically, when performing planned maintenance sensitivity studies, the probability of being in a given maintenance state (i.e., components set to "unavailable") is increased by a factor of 10 for each planned maintenance state in the PRA. The duration of planned maintenance states is based on actual historical unavailability as tracked by STP.

This methodology change does not impact the basis for NRC approval of the risk-informed Operations Quality Assurance Program or the exemption from certain special treatment requirements. STP, as the industry's proto-type pilot for 10CFR 50.69 activities, is communicating this change to keep the NRC staff informed of lessons learned which add efficiency and robustness into the categorization process.

If there are any questions regarding this change, please contact me at (361) 972-7136.



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