Nuclear Operating Company

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

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

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South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Revised Open Item Responses Supporting the Request for Exemption
to Exclude Certain Components
From The Scope of Special Treatment Requirements Required by Regulations

Reference 1: Draft Safety Evaluation on Exemption Requests from Special Treatment Requirements of 10CFR Parts 21, 50, and 100 (TAC Nos. MA6057 and MA6058), dated November 15, 2000

In Reference 1, the Nuclear Regulatory Commission (NRC) responded to the STP Nuclear Operating Company's (STPNOC) request for an exemption from various special treatment requirements found in the regulations. The NRC response, via a Draft Safety Evaluation Report, included both Open Items and Confirmatory Items in the body of the response. Following a meeting between STPNOC and NRC personnel on February 15 and 16, 2001 to discuss these Open Items responses, STPNOC is submitting revised responses to three of the Open Items. The three revised responses are attached, and include replies to Open Item 3.6, Open Item 4.1, and Confirmatory Item 4.2. In addition, affected pages 6,7, and 8 of UFSAR 13.7 are included.

- Attachment 1 Open Item 3.6
- Attachment 2 Open Item 4.1
- Attachment 3 Confirmatory Item 4.2
- Attachment 4 UFSAR 13.7

If you have any questions, please call Mr. Glen E. Schinzel at 361-972-7854 or me at 361-972-8757.

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Open Item 3.6: STPNOC needs to finalize its process for the development and implementation of general notes in the categorization of SSCs and provide it to the NRC for review. Further issues may be developed related to this area after receipt of the finalized process.

Revised Response:

As stated in UFSAR Section 13.7.2.4, general notes are used to document component risk justification, where needed, for similar component types that are treated the same from system to system. Examples include handswitches, indication-only instrumentation, and vent/drain valves. Due to the large number of such components and the similarity of the justification from component to component and from system to system, reference to a general note provides an efficient and consistent method to document the appropriate justification. Components covered by a general note are not excluded from review by the GQA Working Group. These components are evaluated along with other components to ensure proper applicability of the note and appropriateness of the risk categorization. The use of general notes is simply an administrative tool that allows for increased efficiency in the documentation of justifications of large numbers of similar components. In other words, rather than repeating the same justification over and over again for similar components, reference to a general note provides a consistent and efficient method for documenting the justification. General notes are not used for system functions.

STPNOC has enhanced its process for the development and implementation of general notes used in the categorization of SSCs. Specifically, STPNOC has performed the following:

1. Enhancement of General Notes – As shown by the attached, the justifications provided to support the risk categorizations have been revised to provide a more comprehensive and technically defensible basis. In addition, the scope of the notes has been clarified in some instances. In cases where a general note was eliminated (i.e., relief valves and pressure boundary), the documented risk basis for each affected SSC was enhanced with clarifying detail.

2. The methodology for use of the general notes has been incorporated into a draft revision to the Graded QA Working Group procedure. The attached excerpt provides additional details.

3. The control of general notes, including development, approval, and change control, has also been included in the above procedure revision.

4. The GQA Working Group has completed a comprehensive effort to review the previous component categorizations that involved the use of general notes and to compare the categorizations to the revised notes. The purpose of the review was to ensure that, based on the revised notes, the component was within the scope of the note and that its risk categorization was consistent with that called out by the note. The risk categorization of some components was changed as a result of this review. The review process and the risk changes were presented to and approved by the Expert Panel.

5. As part of the above review and consistent with improvements in the risk significance basis document (RSBD) for risk categorizations, any component that utilizes a general note as a basis will now have that general note number referenced in the RSBD documented bases for risk categorizations.

GENERAL NOTES FOR GQA REVIEW

#	SUBJECT	SCOPE	RISK (see remarks)	BASIS
1	Vent , drain, test valves	1 inch or less in size	NRS	Normally closed and capped. Gross leakage not credible. Good reliability based on STP and industry experience. Operator rounds are conducted periodically and would quickly identify any leakage. The Configuration Management program, which includes initial valve lineups, the Equipment Clearance Order process, and independent/dual verifications, provides adequate controls of valve position and ensures that the valve is capped.
2	Normally open manual valves in main flow path	Does not include throttle valves	Same as pressure boundary risk	An open valve is essentially a piece of pipe. Valve disk failure in a manner which would impede flow is not considered a credible event. These valves are locked open or locked-in-place, where additional assurance is required. Gross leakage not credible. Good reliability based on STP and industry experience. Operation of the system and the monitoring of system parameters are other indicators of proper valve status. Operator rounds are conducted periodically and would quickly identify any leakage. The Configuration Management program, which includes initial valve lineups, the Equipment Clearance Order process, and independent/dual verifications, provides adequate controls of valve position and ensures that the valve is locked, if applicable.
3	Other valves not included in Notes 1 and 2 above, including instrument root valves and branch line valves	a. 1 inch or less in size b. Size of valve relative to main process piping is small	NRS for pressure boundary purposes only	Gross leakage not credible. Good reliability based on STP and industry experience. Operator rounds are conducted periodically and would quickly identify any leakage. The Configuration Management program, which includes initial valve lineups, the Equipment Clearance Order process, and independent/dual verifications, provides adequate controls of valve position.
4	Snubbers		Same as pressure boundary risk	Even though the snubber is designed to protect the system during a seismic event, the more credible failure mode would be failure of a snubber to allow for thermal movement during normal operations (fail rigid). If such a failure were severe enough to cause overstressing, it would exhibit itself first through deformation of the snubber itself or to its supports. It is highly unlikely that the piping would be damaged (EPRI report TR-110381) and even if it were, it would be through plastic deformation and/or through a leak-before-break scenario. Piping leaks would become quickly evident during routine operator rounds, system engineer walkdowns, or other visual or system performance indication. The probability of such an unlikely event occurring at the same time as a safety system being demanded to support accident or transient mitigation is even more remote. Piping failure during a seismic event from a "fail free" snubber is also very unlikely due to the robustness of the ASME-designed systems (EPRI report TR-110381). Snubber is conservatively assigned the same risk as the pressure boundary risk for the portion of piping that the snubber is located on.

Remarks:
1. Unless ranked higher by the PRA.
2. When a critical attribute is provided for a component, it is understood that the critical attribute must function sufficiently enough to meet the design functional requirements associated with that attribute. For example, the attribute "Permit Flow in normal direction", as given to a check valve is understood to mean that the check valve must not only open in the normal direction of flow, but must open sufficiently enough to meet design flow requirements.
3. For a valve, the critical attribute of "pressure boundary" means ability to contain the fluid if the valve is normally open and ability to contain the fluid and isolate the line if the valve is normally closed.
4. Closed and capped 1 inch or less test valves that are part of the containment isolation boundary fall under the scope of Note 1 and are NRS.

GENERAL NOTES FOR GQA REVIEW

#	SUBJECT	SCOPE	RISK (see remarks)	BASIS
5	Instrument Indication and recorders, including supporting devices such as transmitters, etc.	a. Visual indication only. Not involved in the generation of alarms or actuation signals b. Not identified by Operations as being critical	NRS	Failure would not affect risk significant system functions. The majority of these are local indicators. Diverse indication is typically available.
6	Handswitches, Control Room	If controlled component has some risk significance, risk of switch cannot be NRS	1 Level lower than controlled component	Reliability of handswitches has been very good. Local/ASP redundant switch available. Most time sensitive operations are automatic, do not require switch manipulation, and rely only on handswitch circuit continuity for success. The probability of a circuit continuity failure in a static role is very low and is clearly less than the probability of failure for the controlled component, which must change state. Automatic safety systems are periodically tested and these tests include the automatic initiation circuitry. In addition, handswitches are manipulated on a regular basis as part of routine operations. Any failure in the handswitch or its associated electrical circuitry would manifest itself during these operations.
7	Handswitches, Transfer (between control room and local/ASP)	If controlled component has some risk significance, risk of switch cannot be NRS	2 Levels lower than controlled component	Reliability of handswitches has been very good. Preferred method is to use control room switch. Transfer switch is normally positioned for control room operations. Thus, transfer switch would not normally have to be manipulated. Only function is circuit continuity. The probability of a circuit continuity failure in a static role is very low and is clearly less than the probability of failure for the controlled component, which must change state. Automatic safety systems are periodically tested and these tests include the automatic initiation circuitry.
8	Handswitches. Local or on Aux Shutdown Panel	If controlled component has some risk significance, risk of switch cannot be NRS	2 levels lower than controlled component	Reliability of handswitches has been very good. The need to use this switch would mean failure of the automatic initiation, if applicable, and either a malfunction in the control room switch or a need to evacuate the control room, both highly unlikely events.

Remarks:
1. Unless ranked higher by the PRA.
2. When a critical attribute is provided for a component, it is understood that the critical attribute must function sufficiently enough to meet the design functional requirements associated with that attribute. For example, the attribute "Permit Flow in normal direction", as given to a check valve is understood to mean that the check valve must not only open in the normal direction of flow, but must open sufficiently enough to meet design flow requirements.
3. For a valve, the critical attribute of "pressure boundary" means ability to contain the fluid if the valve is normally open and ability to contain the fluid and isolate the line if the valve is normally closed.
4. Closed and capped 1 inch or less test valves that are part of the containment isolation boundary fall under the scope of Note 1 and are NRS.

GENERAL NOTES FOR GQA REVIEW

#	SUBJECT	SCOPE	RISK (see remarks)	BASIS
9	Containment Isolation	Line penetrating containment is part of a water system	LOW	Leakage paths that would threaten public health and safety are not credible. Failure of a containment isolation valve that is normally closed or that closes upon receipt of a containment isolation signal would not lead to a radiation release to the outside environment unless multiple failures of equipment occur at nearly the same time. A loss of coolant accident must occur along with a piping break and failure of the redundant containment isolation valve to close. Containment isolation valves that are required to be open during accident conditions are in a closed water system which is under duty during accident conditions and, therefore, represent pathways for mass and inventory to enter containment and, if exiting containment, represent mass and inventory which is contained in a closed system. In addition, the piping systems have a much higher pressure rating than the containment building.
10	Alarm Instrumentation		No higher than LOW	Provides useful information to operator, but failure would not, in and of itself, fail a risk significant system function. Diversity of alarm indication and system parameter indication are typically available.
11	Panels, Enclosures, and Terminal boards		No higher than LOW	Ranked LOW if they contain risk significant components (MEDIUM OR HIGH); otherwise ranked NRS. Passive and inherently reliable device, based on STP and industry experience.
12	Limit Switches	a. Indication only, i.e., does not provide actuation signal b. Not identified by Ops as being critical	NRS	Indication only. Failure would not, in and of itself, fail a risk significant system function. Diversity is available through other means, such as indication of flow, pressure, etc. In addition, valves and HVAC dampers are manipulated on a regular basis as part of routine operations. Any failure in the associated position limit switches or in the associated electrical circuitry would manifest itself during these operations.

Remarks: 1. Unless ranked higher by the PRA.

2. When a critical attribute is provided for a component, it is understood that the critical attribute must function sufficiently enough to meet the design functional requirements associated with that attribute. For example, the attribute "Permit Flow in normal direction", as given to a check valve is understood to mean that the check valve must not only open in the normal direction of flow, but must open sufficiently enough to meet design flow requirements.
3. For a valve, the critical attribute of "pressure boundary" means ability to contain the fluid if the valve is normally open and ability to contain the fluid and isolate the line if the valve is normally closed.
4. Closed and capped 1 inch or less test valves that are part of the containment isolation boundary fall under the scope of Note 1 and are NRS.

EXCERPT FROM DRAFT REVISION TO ZA-0001, GQA WORKING GROUP PROCEDURE

General Notes

General Notes are used to provide component risk justification, where needed, for similar component types that are treated the same from system to system. Examples include handswitches, indication-only instrumentation, and vent/drain valves. Due to the large number of such components and the similarity of the justification from component to component and from system to system, reference to a general note provides an efficient and consistent method to document the appropriate justification.

An example of a general note is provided below:

#	SUBJECT	SCOPE	RISK	BASIS
1	Vent, drain, test valves	1 inch or less in size	NRS	Normally closed and capped. Gross leakage not credible. Good reliability based on STP and industry experience. Operator rounds are conducted periodically and would quickly identify any leakage. The Configuration Management program, which includes initial valve lineups, the Equipment Clearance Order process, and independent/dual verifications, provides adequate controls of valve position and ensures that the valve is capped.

In the example above, the justification for vent valves one inch or less being NRS can be provided simply by referencing this note rather than repeating the detailed justification for each valve. Where a general note is used to justify a risk categorization for a particular component, the note number shall be documented in the "Additional Deterministic Input" column.

General Notes are developed by the GQA Working Group and approved for use by the Expert Panel. They are considered a controlled document and any changes, other than editorial changes, require the approval of the Expert Panel. General Notes are included in their entirety in each RSBD, even though some notes may not be applicable to that system.

Open item 4.1: STPNOC needs to describe in the FSAR the process attributes for determining the appropriate treatment to be applied to risk-significant functions of both safety-related and non-safety related HSS and MSS SSCs not currently covered by programs established in response to the NRC regulations.

Revised Response:

STPNOC has revised its proposed UFSAR Section 13.7, which is attached. In particular, proposed UFSAR Sections 13.7.3.1 and 13.7.3.2 have been revised to describe the process for determining the appropriate treatment to be applied to the risk-significant functions of safety-related and non-safety-related HSS and MSS components not currently covered by programs established in response to NRC regulations (i.e., risk-significant beyond-design-basis functions). This revision reflects the proposed resolutions discussed during the meetings on December 6 and 8, 2000, and February 15 and 16, 2001.

As part of the discussion of this Open Item in the draft safety evaluation, NRC commented that there is a need to monitor the performance of risk-significant functions of HSS and MSS SSCs at the component level. The response to Open Item 13.1 addresses those comments.

Additionally, as part of the discussion of this Open Item in the draft safety evaluation, NRC commented that STP needs to evaluate facility changes to risk-significant beyond-design-basis functions of HSS and MSS components to ensure that those functions will continue to be satisfied and that the credit assumed in the categorization process remains valid. Design changes are not within the scope of the exemption request. However, STP notes that design changes to risk-significant beyond-design-basis functions of HSS and MSS components will continue to be controlled in accordance with its Appendix B design control program. Additionally, as discussed in proposed UFSAR Section 13.7.5.1, STP has a PRA configuration control program to ensure that changes in plant design are reflected in the PRA.

Confirmatory Item 4.2: STPNOC must confirm its commitment to adhere to the NRC-endorsed NEI guidance on commitment management.

Response:

Changes in special treatment requirements for any SSC that is not within the scope of the exemption will continue to be controlled by the STPNOC commitment change process. This process satisfies NEI 99-04 'Guidelines for Managing NRC Commitment Changes', which the NRC has endorsed. For changes in special treatment requirements that are granted by the exemption, STPNOC will submit periodic FSAR updates in accordance with 10CFR50.71(e), or will provide an annual report updating its commitments in accordance with NEI 99-04.

A function with a low categorization due to a low sum can receive a higher risk classification if any one of their five questions received a high numerical answer. Specifically, a weighted score of 25 on any one question results in an HSS categorization; a weighted score of 15-20 on any one question results in a minimum categorization of MSS; and a weighted score of 9-12 on any one question results in a minimum categorization of LSS. This is done to ensure that a component with a significant risk in one area does not have that risk masked because of its low risk in other areas.

In general, a component is given the same categorization as the system function that the component supports. However, a component may be ranked lower than the associated system function.

General notes are used to document component risk justification, where needed, for similar component types that are treated the same from system to system. Components covered by a general note are evaluated by the Working Group to ensure proper applicability of the note and appropriateness of the risk categorization. The use of general notes is an administrative tool that allows for increased efficiency in the documentation of justifications of large numbers of similar components. General notes are not used for system functions.

13.7.2.5 Defense in Depth and Safety Margins. For the following reasons, the exemption and the categorization process maintain defense in depth and sufficient safety margins:

- **Functional requirements and the design configuration of systems are retained.**
- **No existing plant barriers are removed or altered.**
- **Design provisions for redundancy, diversity, and independence are maintained.**
- **The plant's response to transients or other initiators is not affected.**
- **Preventive or mitigative capability of components is preserved.**
- **There is no change in any of the safety analyses in the UFSAR.**
- **Existing safety-related LSS and NRS components will not be replaced, absent good cause (e.g., obsolescence or failure). Since the existing safety-related LSS and NRS components were designed, procured, manufactured, and installed in accordance with the existing special treatment requirements, these components have inherent design margins to perform their intended functions that will not be adversely affected by this exemption.**
- **Normal commercial and industrial practices provide an appropriate and acceptable level of assurance that safety-related LSS and NRS components will be able to perform their intended functions.**
- **The corrective action program is applied to safety-related LSS and NRS components. This program provides reasonable assurance that deficiencies involving safety-related LSS and NRS components will be identified, corrected, and necessary action taken to ensure acceptable performance levels are maintained.**

13.7.3 Treatment for Component Categories

13.7.3.1 Description of Treatment for Component Categories. The following treatment is provided for the various component categories:

- **Safety-Related HSS and MSS Components – These components continue to receive the treatment required by NRC regulations and STP's associated implementing programs. Some safety-related components may be called upon to perform functions that are beyond the design basis or perform safety-related functions under conditions that are beyond the design basis. STP's PRA does not take credit for such functions unless there is basis for confidence that the component will be able to perform the functions (e.g., the functions are subject to special treatment; demonstrated ability of the component to perform the functions under the specified conditions). Additionally, to the extent that the PRA does credit such functions, the PRA assumes a reduced reliability for the function commensurate with the severity of the beyond design basis conditions in question and the special treatment provided to the function. However, if STP should decide to take credit for such functions beyond that described above, STP would use the process described in Section 13.7.3.2 to evaluate the risk-significant functions performed by these components that are not being treated under STP's current programs, and provide enhanced treatment for such functions.**

- **Non-Safety-Related HSS and MSS Components – These components will continue to receive any existing special treatment required by NRC regulations and STP's implementing programs. Additionally, the risk-significant functions of these components will receive consideration for enhanced treatment. This consideration is described in Section 13.7.3.2.**

- **Safety-Related LSS and NRS Components – These components receive STP's normal commercial and industrial practices. These practices are described in Section 13.7.3.3.**

- **Non-Safety-Related LSS and NRS Components – The treatment of these components is not subject to regulatory control.**

- **Uncategorized Components – Until a component is categorized, it continues to receive the treatment required by NRC regulations and STP's associated implementing programs, as applicable.**

13.7.3.2 Enhanced Treatment for HSS and MSS Components. Non-safety-related HSS and MSS components may perform risk-significant functions that are not addressed by STP's current treatment programs.

When a non-safety-related component is categorized as HSS or MSS, STP documents the condition under the corrective action program and determines whether enhanced

treatment is warranted to enhance the reliability and availability of the function. In particular, STP evaluates the treatment applied to the component to ensure that the existing controls are sufficient to maintain the reliability and availability of the component in a manner that is consistent with its categorization. This process evaluates the reliability of the component, the adequacy of the existing controls, and the need for any changes. If changes are needed, additional controls are applied to the component. In addition, the component is placed under the Maintenance Rule monitoring program, if not already scoped in the program (i.e., failures of the component are evaluated and Maintenance Rule Functional Failures (MRFF) involving the component are counted against the performance criteria at the plant/system/train level, as applicable). Additionally, as provided in the approved GQA program, non-safety-related HSS and MSS components are subject to the TARGETED QA program. These controls will be specifically 'targeted' to the critical attributes that resulted in the component being categorized as HSS or MSS. Components under these controls will remain non-safety-related, but the special treatments will be appropriately applied to give additional assurance that the component will be able to perform its HSS/MSS function when demanded.

As discussed in Section 13.7.3.1, STP's PRA does not take credit for the beyond-design basis functions of safety-related components, unless there is a basis for confidence that the component will be able to perform the functions. However, if STP should decide to take credit for a risk-significant function in a situation in which existing special treatment does not provide the applicable level of confidence, STP would use the process described above to evaluate enhanced treatment for the function.

These identified processes provide reasonable assurance that HSS and MSS components will be able to perform their safety significant functions.

13.7.3.3 Normal Commercial and Industrial Practices for Safety-Related LSS and NRS Components

A description of STP's commercial practices is provided below.

13.7.3.3.1 Design Control Process. The Station's Design Control Program is used for safety-related SSCs, including safety-related LSS and NRS SSCs). The Design Control Program complies with 10 CFR Part 50, Appendix B and is described in the Operations Quality Assurance Plan (OQAP).

13.7.3.3.2 Procurement Process. Technical requirements (including applicable design basis environmental and seismic conditions) are specified for items to be procured, which include the original design inputs and assumptions for the item. One or more of the following methods are used to determine that the procured item can perform its safety-related function under design basis conditions, including applicable design basis environmental and seismic conditions: