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REVIEW GUIDELINES FOR STP EXEMPTION REQUEST AND BASELINE ACCEPTANCE CRITERIA FOR RIP50 OPTION 2

1.0 INTRODUCTION

This document contains the guidelines for reviewing the STP request per 10 CFR 21.7 and 10 CFR 50.12 for exemptions from numerous special treatment requirements. These guidelines have been assembled utilizing input from the lead technical divisions. The guidelines were reviewed by the RIP50 core team.

These review guidelines are an initial draft of the acceptance criteria to be incorporated into 10 CFR 50.69 and 10 CFR Appendix T for RIP50. [Note that the corresponding RIP50 analogy will be provided in brackets where appropriate.] The staff will continue developing the RIP50 option 2 acceptance criteria to develop a final set approved by NRR by 12/31/00.

The guidelines address the acceptability of the STP proposal [and are rev 0 for the RIP50 Option 2 acceptance criteria] in three general areas:

1. Categorization guidelines [Appendix T for RIP50]
2. Treatment guidelines (includes change control and monitoring guidelines) [50.69 for RIP50]
3. Licensing basis documentation [RG + NEI guideline + potentially UFSAR for RIP50]

This sentence makes no sense. Categorization of SSCs, by itself, has no effect on the plant. Only mods or treatment changes have an effect. SF

2.0 CATEGORIZATION GUIDELINES

The determination of safety significance of structures, systems, and components (SSCs) must be performed as part of an integrated decision-making process which uses both risk insights and traditional engineering insights. In categorizing SSCs, it must be demonstrated that the defense-in-depth philosophy is maintained, that sufficient safety margin is maintained, and that increases in risk, if any, are small. Results of the categorization process should be maintained by use of performance measurement strategies. validated GS

To accomplish these objectives, the process to categorize SSCs should consist of the following elements:

2.1 Assessment of the Capability of the Plant-specific Probabilistic Risk Assessment (PRA) to Support the Categorization Process

At a minimum, a PRA modeling the internal initiating events at full power operations shall be used for SSC importance analysis and determination of change in risk from the application. The PRA must be capable of quantifying core damage frequency (CDF) and large early release frequency (LERF). When categorizing SSCs, the licensee shall also consider external event initiators, as well as the shutdown and low-power modes of operation, either by PRA modeling

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Comment legend

SF - Steve Frantz BS - Bill Stillwell

RC - Ralph Chackal RG - Rick Granton

GS - Glen Schinzel

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Need tolerance for plant changes. GS

No! This needs to be done in a procedure process. RG

or by the integrated decision-making process.

PRA quality must be demonstrated, in a manner that is consistent with accepted practices, commensurate with the level of detail sufficient to model the impact of the proposed change. The PRA must reflect the as-built and as-operated plant and must satisfy the pertinent quality assurance requirements as specified in section 2.5 of RG 1.174 "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis".

Perform a screening & evaluation to determine if there is possible impact RC

Once every 36 mo might be better. SF, GS

When used for SSC categorization, and as long as regulatory requirements are being dictated by this categorization, the PRA must be updated within six months after each refueling outage provided the interval between successive updates does not exceed 24 months, to reflect changes in plant operation, design, or procedures. Updates to the PRA are mandatory prior to implementation of changes to plant design or procedures, if these changes could affect the categorization of SSCs. A PRA update is also required upon receipt of new PRA information which could invalidate the results of the categorization process. Upon the completion of a PRA update, the SSC categorization shall be revisited and updated as appropriate.

PRA RC

This seems unnecessarily restrictive for conservative changes SF.

Does this mean changed in any way? RG

2.2 SSC categorization by the integrated decision-making panel (IDP)

An integrated decision-making panel must be used to determine the safety significance of SSCs. The categorization of SSCs as either HSS (high safety significant)/MSS (medium safety significant) [RISC-1 or RISC-2] or LSS (low safety significant)/NRS (not risk significant) [RISC-3] must consider: results of the PRA analysis; deterministic and other traditional engineering analyses; ~~maintenance~~ of the defense-in-depth philosophy; and ~~maintenance~~ of safety margins.

whether the SSC contributes to SF

2.2.1 Use of PRA Insights for SSCs Explicitly Modeled in the PRA

Relative importances of SSCs modeled in the PRA should be determined using PRA importance measures or similar methodologies. The results of this process together with results of sensitivity studies shall be used as inputs to the integrated decision-making process for the categorization of SSCs.

2.2.1.1 Initial screening criteria

SSC importances must be determined based on both CDF and LERF. Importance measures should be chosen such that results can provide the IDP with information on the relative contribution of an SSC to total risk. Examples of importance measures that can accomplish this are the Fussell-Vesely (F-V) importance and the Risk Reduction Worth (RRW) importance. Importance measures should also be used to provide the IDP with information on the safety margin available should an SSC fail to function. The Risk Achievement Worth (RAW) importance and the Birnbaum importance are example measures that are suitable for this purpose.

This makes no sense. Importance measures refer to risk, not safety margins as defined by NRC. SF

In the initial screening stages, an SSC with F-V < 0.005 based on either CDF or LERF, and RAW < 2 based on either CDF or LERF can be considered as potentially LSS/NRS [RISC-3].

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Other Risk Metrics. - My feeling on the last 4 questions (vii, viii, ix and x) is that these will result in a reduction in the gains we could potentially achieve in the GQA program.

(7) This criterion goes beyond LERF. Barriers to fission product release during severe accidents will include Any Containment Penetration and consideration of all releases, not just Large Early.
(8) SSC is depended upon in EOPs or SAMGs. Is this the same as mentioned? Has our process considered SAMGs?
(9) Failure of the SSC will result in unintentional release even in the absence of severe accident conditions. This will pick up the radioactive management and control systems (LWP, Radiation Monitoring, etc) thus further reducing the pool of LRS or NRS equipment.
(10) The SSC is relied upon to control or mitigate the consequences. I think this is related to viii

The draft IDP evaluation process will impose several new criteria and analyses in order to support ranking components as LRS or NRS. The overall process would result in a decrease in the number of LRS/NRS equipment. The defense-in depth and maintenance of safety margins analyses could be cost-prohibitive (little or no benefit to justify the expected cost).

STP Comments on the Draft Review Guidelines for the STP Exemption Request

Section 1.0 Introduction

None

Section 2.0 Categorization Guidelines

PRA Quality – Our PRA has not been reviewed by the WOG Peer Review process. Which is the only *(somewhat)* accepted The model has been extensively reviewed by the NRC in support of other applications. The model in general satisfies the QA requirements of RG 1.174.

The update procedure will have to be revised to explicitly identify the criteria spelled out in this section (changes in operations, design, or procedures).

Section 2.2 SSC Categorization

2.2.1.1 Initial Screening Criteria We have not generated risk-ranks for internal initiating events without external initiating events. The NRC document implies that component Risk-Ranking may be artificially lowered in a combined model. In the case of the external events, the sensitivity case we ran using external events only did not significantly (almost zero) affect the component risk rankings.

2.2.1.2 Evaluation of the overall risk impact. The NRC still wants us to change failure data to " the level corresponding to the failure likelihood for the revised treatment requirements." If we can't perform this quantitatively, the IDP must provide the justification. I'm not sure how this can be accomplished.

2.2.2 Use of Risk Insights for SSCs Not Modeled in PRA

It appears that there are some SSCs for which the NRC expectation is the only answer (e.g. RCPB, MS and FW Class II Piping). I believe that the categorization process actually results in the NRC's desired outcome, so obviously, our categorization process is "sufficiently robust."

(i) For those initiating events that were screened out of the PRA, does this requirement mean that any initiating event that was ever mentioned in the PRA or background documents must be specifically reevaluated?

(v) Spatial interaction is already considered in the PRA and contributes through fires, floods, etc to core damage. Does this requirement mean that the IDP must reconsider any spatial interaction?

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what is this? RC

The low safety significance of SSCs must be confirmed based on an assessment of the overall impact of SSC re-categorization and a comparison of this impact to the acceptance criteria for changes in CDF and LERF as described in Section 2.2.1.2.

Application of the above guidelines will also identify a list of SSCs that are determined to be HSS/MSS [RISC-1 or RISC-2] by the PRA. These SSCs shall not be re-categorized as potentially LSS/NRS [RISC-3] by the IDP process.

please cite

The PRA models for external initiating events, and for low power and shutdown plant operating modes may be conservative with respect to those for internal initiating events. Use of conservative models can influence the calculation of importance measures by moving more SSCs into the low safety significance category. Therefore, when PRA models for external event initiators and for the low power and shutdown modes of operation are available, the importance measures shall be evaluated for each analysis separately, as well in an integrated manner. Results of the analyses should be provided to the IDP for deliberation.

More PRA models are being required. GS

Do as a sensitivity study. RG

We don't expect failures to increase. How do we estimate new failure probability on revised treatment reqmts? Even if you assume that failures would increase, this would not happen until the component is replaced. RC

2.2.1.2. Evaluation of the overall risk impact from reclassifying SSCs

The change in risk from reclassifying SSCs shall be quantified. The potential impact of relaxing treatment requirements on SSCs must be evaluated in an integrated manner. Changes in CDF and LERF must be estimated by calculations where the failure likelihood of SSCs is changed to the level corresponding to the failure likelihood for the revised treatment requirements.

Bounded by 10λ Sensitivity study RG

Estimated changes to CDF and LERF must be small and consistent with the guidance in section 2.2.4 of RG 1.174.

If the impact of the revised treatment requirements cannot be easily quantified or in cases when a PRA model is not available to evaluate the change in risk from an external initiating event or plant operating mode, the IDP must provide justification, on the basis of bounding analyses or qualitative considerations, that the change in risk will be small as defined by the guidelines provided in RG 1.174.

Revised treatment ≠ change in risk

2.2.2 Use of Risk Insights for SSCs Not Modeled in PRA

For SSCs that are not explicitly modeled in the PRA or when external event initiators or the low power and shutdown plant operating modes are not modeled, the IDP shall assess the safety significance of these SSCs by determining if:

relative or absolute? RG

(i) Failure of the SSC will significantly increase the frequency of an initiating event, including those initiating events originally screened out in the PRA. What does this go to? RG

Need to define GS

(ii) Failure of the SSC will compromise the integrity of the reactor coolant pressure boundary. It is expected that a sufficiently robust categorization process would result in the reactor coolant pressure boundary being categorized as HSS [RISC-1].

Aren't some LSS/NRS SSC also ASME components? Will this result in all ASME components being HSS? SF

significant RG

(iii) Failure of the SSC will fail a safety function, including SSCs that are assumed to be

This ignores credibility/probability of failure and failure mode, and is counter to probabilistic risk assessment (e.g. normally open manual valve in main process piping) RC

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inherently reliable in the PRA (e.g., piping and tanks) and those that may not be explicitly modeled (e.g., room cooling systems, and instrumentation and control systems). For example, it is expected for PWRs that a sufficiently robust categorization process would categorize high energy ASME Section III Class 2 piping of the main steam and feedwater systems as HSS or MSS ← unless their failure would not affect a safety function. SF

Categorization is for active components. RG

(iv) The SSC supports important operator actions required to mitigate an accident, including the operator actions taken credit for in the PRA.

Spatial interactions for locations exclude passive failures. RG

(v) Failure of the SSC will result in failure of safety significant SSCs (e.g., through spatial interactions) or through functional reliance of one SSC on the other RC

(vi) Failure of the SSC will impact the plant's capability to reach and/or maintain safe shutdown conditions.

In addition to being safety significant (HSS/MSS) in terms of their contribution to CDF or LERF, SSCs can also be safety significant (HSS/MSS) in terms of other risk metrics or conditions. ← What other metric? RG

Therefore, when an SSC is not identified as safety significant (HSS/MSS) by the PRA, the IDP must establish its safety significance by determining if:

Again, old thinking that ignores probability, credible failure modes, and size of breach. RC

(vii) The SSC is a part of a system that acts as a barrier to fission product release during severe accidents. It is expected that a sufficiently robust categorization process would result in fission product barriers (e.g., the containment shell or liner) being categorized as at least MSS [RISC-1].

I assume that there are small instrument lines off the RCS that are LSS/NRS, because their failure would not result in a sig release. SF

(viii) The SSC is depended upon in the Emergency Operating Procedures or the Severe Accident Management Guidelines.

Unduly restrictive. Would result in all radwaste systems being HSS/MSS. SF

(ix) Failure of the SSC will result in unintentional releases of radioactive material even in the absence of severe accident conditions. In excess of Part 100? → ok RG
Any release? – No!

(x) The SSC is relied upon to control or to mitigate the consequences of transients and accidents.

What is the distinction between this and xiii? RG

Too restrictive. Some transients are unimportant to risk. SF

If any of the above ten conditions are true, the IDP should use a qualitative evaluation process to determine the impact and probability of an SSC failure. RC ~~of relaxing requirements on SSC reliability and performance~~. This evaluation should include identifying the functions being supported by SSC operation, the relationship between the SSC's failure modes and the functions being supported, the SSC failure modes for which the failure rate may increase, and the SSC failure modes for which detection could become more difficult. ← What are these? GS The IDP can justify low safety significance (LSS/NRS) of the SSC by demonstrating ~~one or more of the following:~~

- The reclassification is consistent with the defense-in-depth philosophy (per section 2.2.3 below) and sufficient safety margin is maintained (per section 2.2.4).

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All part of a performance-based program. PIs are already in place. RG

- Operating experience does not indicate active failure mechanisms (e.g., for piping flow accelerated corrosion or MIC), relaxing the requirements will have minimal impact on the failure rate increase, and failures can be detected in a timely fashion
- Relaxing the requirements will have a minimal impact on the expected onsite occupational or offsite doses from transients and accidents that do not contribute to CDF or LERF.
- Failure of the SSC will have little or no impact on risk. RC

2.2.3. Maintaining the defense-in-depth philosophy

When categorizing SSCs as LSS/NRS [RISC-3], the IDP must demonstrate that the defense-in-depth philosophy is maintained. Defense-in-depth is considered adequate if the overall redundancy and diversity among the plant's systems and barriers is sufficient to ensure the risk acceptance guidelines are met, and that:

- Reasonable balance is preserved among prevention of core damage, prevention of containment failure or bypass, and mitigation of consequences of an offsite release
- System redundancy, independence, and diversity is preserved commensurate with the expected frequency of challenges, consequences of failure of the system, and associated uncertainties in determining these parameters
- There is no over-reliance on programmatic activities and operator actions to compensate for weaknesses in the plant design, and
- Potential for common cause failures is taken into account

2.2.4 Maintenance of safety margins

risk significance determination process RC

When categorizing SSCs as LSS/NRS [RISC-3], the IDP shall demonstrate that there are sufficient safety margins to account for uncertainty in the ~~engineering analysis~~ and in the supporting data. Safety margin shall be incorporated when determining performance characteristics and parameters (e.g., component, system, and plant capability) or when defining mission success criteria (e.g., the number of system trains required to mitigate an initiating event or the ability of an SSC to perform in a certain environment). The amount of margin should depend on the uncertainty associated with the performance parameters in question, the availability of alternatives to compensate for adverse performance, and the consequences of failure to meet the performance goals. Demonstration of available safety margins shall be accomplished by use of data from plant operations or research studies, or by use of analyses using established engineering codes and standards or NRC-approved alternatives.

Too extensive. Doesn't the PRA already answer this? RC

2.3 Documentation of the Integrated Decision-making Process and the Decision Criteria Used

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2.3.1. Requirements of the Integrated Decision-making Panel

2.3.1.1 The IDP shall be described in a formal plant procedure which includes:

(i) The designated chairman, panel members, and panel alternates;
(ii) Required training and qualifications for the chairman, members and alternates;
(iii) Requirements for a quorum, attendance records, agendas, and meeting minutes;
(iv) The decision-making process;
(v) Documentation and resolution of differing opinions; and
(vi) Implementation of feedback/corrective actions.

Very prescriptive GS

? RC

2.3.1.2 Expertise in the following fields shall be represented on the IDP: plant operations, design (mechanical and electrical) and materials engineering, systems engineering and operating history, safety analysis engineering, quality assurance, plant licensing, plant maintenance, and probabilistic risk assessment. Members may be experts in more than one field, however excessive reliance on any one member's judgement should be avoided.

Too prescriptive RC GS

2.3.1.3 The licensee shall establish and document specific requirements for ensuring adequate expertise levels of IDP members, and shall ensure that expertise levels are maintained. There shall be at least three members of the IDP with a minimum of five years experience at the plant, and there shall be at least one member of the IDP who has worked on the modeling and updating of the plant-specific PRA for a minimum of three years.

r GS

2.3.1.4 The IDP shall be trained in the specific technical aspects and requirements related to the categorization process. Training shall address, at a minimum,

Does this need to be documented and auditable? GS

(i) The purpose of the categorization,
(ii) Present treatment requirements for SSCs including requirements for design basis events,
(iii) PRA fundamentals, and details of the plant-specific PRA including the modeling scope and assumptions,
(iv) The defense-in-depth philosophy and requirements to maintain this philosophy.
(v) Safety margins

Each of these topics shall be covered to the extent necessary to provide the IDP with a level of knowledge sufficient to evaluate and approve SSC categorization using both probabilistic and deterministic information.

2.3.1.5 IDP decision criteria for categorizing SSCs as HSS/MSS [RISC-1 or RISC-2] or LSS/NRS [RISC-3] shall be documented. When there are differing opinions, and if a resolution cannot be achieved concerning the safety significance of an SSC, then the SSC shall be classified as HSS/MSS [RISC-1 or RISC-2].

Is the STP method appropriate? GS
No! EP to judge. GS

Too restrictive. Appeals to the EP should be permitted! SF.

2.3.1.6 SSC categorization shall be revisited periodically by the IDP when the PRA is updated or when the other criteria used by the IDP are affected by changes in plant operational data or changes in plant design or plant procedures or information developed by the corrective action program. RC

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2.3.2 Documentation of the IDP process

The following shall be documented and available for NRC review:

- Results of the relative risk importance of SSCs modeled in the PRA including the results of sensitivity analyses.
- Results of the final SSC categorization including a summary of IDP deliberations for each SSC classified as LSS/NRS [RISC-3] and each non-safety-related SSC classified as HSS/MSS [RISC-2]. Technical basis documents used to support the categorization shall also be available. What about Box 1,4? GS
- The overall change in plant risk as a result of changes in treatment requirements, including the baseline CDF and LERF and the change in this CDF and LERF. We don't do this. GS
- Requirements for the IDP including, the plant procedure, expertise, membership, training, and decision-making guidelines.
- The PRA used and the supporting analyses, together with a description assuring the quality of PRA.

See 2.2.1.2 comment RC

2.4 Changes to the decision-making process and guidance criteria

At this time guidelines for controlling changes to the decision-making process and guidance criteria have not been developed. The staff has developed alternative approaches to implementing a change control process into the exemption and is evaluating whether the exemption process can accommodate each approach. Need more insight on this. GS

This creates 'Son of Appendix B' SF

3.0 TREATMENT GUIDELINES

significance RC

Safety-related SSCs remain under regulatory control of the *Code of Federal Regulations*, although the extent of special treatment requirements may be reduced or eliminated commensurate with the safety ~~importance~~ of the individual SSCs. The design and functional requirements of the facility continue to be satisfied (e.g., the capability of electrical and mechanical SSCs to perform their safety functions at seismic and environmental design conditions). Sufficient process controls will be retained to demonstrate the capability of safety-related SSCs to perform their safety functions (initially and on a continuing basis) with the level of confidence commensurate with the safety ~~importance~~ of the individual SSC. The key attributes of the procedures and processes that ensure safety-related SSCs remain functionally capable will be described in an appropriate licensee document. For NRS, does this mean NO demonstrat necessary? GS

To what level of detail, and what is the intent? GS

3.1 Safety-related SSCs categorized as HSS or MSS [RISC-1]:

3.1.1 All special treatment requirements must continue to be applied to these SSCs.

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3.1.2 In addition to the special treatment requirements, the following also apply:

(a) For beyond design basis (DB) safety significant functions, the licensee must validate assumptions credited in the risk assessment for SSCs that support or perform these beyond DB functions. In this regard, the risk assessment may be assuming that the SSC performs an entirely different function (for example--valve needs to close when its DB function is to open), or the SSC may be performing the same DB function but at beyond DB limits (for example, expecting the component to maintain integrity to its ultimate failure point), or performing the DB function or a beyond DB function in an environment outside its DB envelope (for example without room coolers). The validation shall consist of a documented engineering evaluation.

Vague. What does it mean? SF

Won't do this if the reqm't is for HSS/MSS (not clear). What is the purpose? RC GS

What level of detail? Auditable? GS

(b) The performance of these SSCs must be monitored at the train or component level and all failures must be evaluated. If 10 CFR 50.65 is utilized to meet this requirement, it must be supplemented to monitor all functional failures not just maintenance preventable failures.

(c) Following facility changes that affect safety significant beyond DB functions, an evaluation must be performed and documented that concludes there continues to be reasonable assurance that safety significant beyond DB functions continue to be satisfied and that the credit taken in the categorization process continues to be validated.

To be done by PRA Group or Eng? GS

(d) Evaluations are performed to determine whether enhanced treatment is warranted for SSCs categorized as HSS or MSS [RISC-1] to assure that the beyond DB safety significant function is satisfied.

Non-safety-related SF

3.2 **Nonsafety-related SSCs categorized as HSS or MSS [RISC-2]:**

3.2.1 Any applicable special treatment requirements continue to apply to the safety sig function of these SSCs. GS

3.2.2 In addition to any applicable special treatment requirements, the following also apply:

(a) The licensee must validate the assumptions credited in the risk assessment for these SSCs. The validation shall consist of a documented engineering evaluation.

What is the purpose if the result is HSS/MSS? RC

Vague. What does this mean? SF GS

(b) The performance of these SSCs must be monitored at the train or component level and all failures must be evaluated. If 10 CFR 50.65 is utilized to meet these requirements, it must be supplemented to monitor all failures not just maintenance preventable failures.

No, only failures associated with the HSS/MSS system function that is supported by the SSC. RC

(c) Following facility changes that affect safety significant functions, an evaluation must be performed and documented that concludes there continues to be reasonable assurance that safety significant functions continue to be satisfied.

Timing and detail? GS

(d) Evaluations are performed to determine whether enhanced treatment is warranted for SSCs categorized as HSS or MSS [RISC-2] to assure that the safety significant function is satisfied.

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3.3 Safety-related SSCs categorized as LSS or NRS [RISC-3]:

3.3.1 10 CFR 50.59

design only GS

10 CFR 50.59 shall continue to apply to the technical requirements associated with the LSS and NRS [RISC-3] safety-related SSCs (i.e., the special treatment requirements are no longer applicable to these SSCs). Regarding the facility change to remove these SSCs from the scope of the special treatment requirements, there is an exemption [footnote to 50.59 for RIP50] to change the safety significance categorization (but not the safety-related and nonsafety-related classification) for SSCs in accordance with the STP risk-informed categorization [Appendix T] without the need for an associated 10 CFR 50.59 safety evaluation to accompany the categorization (i.e., the categorization process is sufficiently robust to address 50.59 issues for removing special treatment requirements and as such it is redundant to require an additional 50.59 evaluation to support the risk-informed categorization).

3.3.2 Design, Procurement, Installation, Operation, and Maintenance Processes

LSS and NRS [RISC-3] SSCs shall be designed, procured, installed, operated, and maintained using balance of plant (BOP) commercial practices with the attributes described in Section 3.5 such that they remain capable of performing their design functions. Functional capability can be addressed through the BOP commercial practices, or to the extent these processes do not address design functionality, an engineering evaluation may be performed that concludes, using a confidence level commensurate with the risk significance, that functional capability is maintained.

RC

3.3.3 Monitoring Requirements

risk commensurate RC

The performance and condition of LSS and NRS [RISC-3] safety-related SSCs shall be monitored consistent with the assumptions made in the risk assessment and to provide adequate assurance of continued functionality. BOP commercial practices, if used shall encompass the attributes described in Section 3.5 related to monitoring. Failed and/or degraded condition shall be repaired and/or restored in accordance with the licensee's corrective action process. The results of this monitoring shall be incorporated into the categorization process.

at the plant level, if failure affects the safety sig function, then at the system/train level. GS

3.4 Nonsafety-related SSCs categorized as LSS or NRS [Out-of-scope]:

3.4.1 No additional requirements are necessary to implement the STP exemption.

3.5 Minimal Acceptable Commercial Practices and Controls

The following aspects of BOP commercial processes to be applied to safety-related SSCs categorized as having low individual risk significance (LSS/NRS SSCs) at South Texas Project need to be addressed to allow the NRC staff to reach a conclusion ~~with a sound engineering basis~~ that these SSCs will perform their specified safety functions. The acceptable level of confidence in the functionality of safety-related LSS/NRS SSCs will be lower than the level of

that these processes are sufficiently sound to provide a reasonable level of assurance, commensurate with the risk significance, RC

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provide reasonable, risk-commensurate assurance that RC

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confidence in the functionality of safety-related HSS and MSS SSCs. BOP commercial practices shall ~~ensure~~ functional requirements of the facility continue to be satisfied (e.g., the capability of electrical and mechanical SSCs to perform their safety functions at seismic and environmental design conditions). The BOP commercial practices and controls utilized for any or all aspects of HSS, MSS, LSS, or NRS safety related SSCs [RISC-1, RISC-2, RISC-3 SSCs] shall satisfy the following minimum programmatic criteria:

why are these here? GS

3.5.1 Design Process

Don't do these on R-2. GS

3.5.1.1 Maintenance of design inputs and functional requirements. This includes (1) the capability of electrical, instrumentation and control system components and mechanical components to withstand a seismic event using the appropriate structural design response spectra including component level seismic and other applicable loads in combination; and (2) the capability of electrical and instrumentation and control system components to withstand a harsh environment based on the environmental envelope.

3.5.1.2 Repair, replacement or modification of pressure-retaining capability of ASME Class 2 and Class 3 systems using nationally recognized consensus standards.

This term is used repeatedly. It is undefined & open-ended. May require continual changes as standards are issued/changed. Vague. SF GS

3.5.1.3 Accomplishment of design activities in accordance with commercially accepted national consensus standards as applicable and to the extent that national consensus standards exist for a subject.

3.5.2 Procurement Process

3.5.2.1 Sufficient engineering basis for the acceptance of the SSC based on design specifications including the original design inputs and assumptions.

can we procure from a catalog? GS

3.5.2.2 Accomplishment of procurement in accordance with commercially accepted national consensus standards as applicable and to the extent that national consensus standards exist for a subject meeting the requirements of the design standard.

3.5.2.3 Shipping, storage and handling requirements consider vendor recommendations or a documented basis for alternatives.

always do, but don't document. GS

3.5.2.4 Receipt inspection to ~~ensure that the procured SSC matches the design specifications~~ provide reasonable assurance that the SSC received is the same as the SSC ordered. RC

don't always use specs GS

This is essentially equivalent to (or more stringent than) commercial dedication. Receipt inspections should be limited to checks for damage & verification of item identity. SF

3.5.3 Installation Process

3.5.3.1 Preoperational and preservice testing and ~~evaluation to assure proper installation and operation.~~ RC

3.5.3.2 Installation in accordance with commercially accepted national consensus standards as applicable and to the extent that national consensus standards exist for a subject meeting the requirements of the design standard.

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3.5.4 Maintenance Process

provide reasonable assurance of RC

This exceeds NRC regulations. SF

3.5.4.1 Preventive maintenance considering vendor recommendations or documented basis for alternatives to ~~ensure~~ continued SSC functionality.

We don't do this now. GS

3.5.4.2 Corrective maintenance to implement corrective action process.

What does this mean? GS

as appropriate, RC

3.5.4.3 Post-maintenance testing and evaluation (including examination and testing of repaired items) to assure proper performance of maintenance and subsequent operation.

PMTs are regulatorily req'd! GS

3.5.4.4 Maintenance in accordance with commercially accepted national consensus standards as applicable and to the extent that national consensus standards exist for a subject.

Does this need to be proven? GS

3.5.5 Inspection, Test, and Surveillance Process

provide reasonable assurance of RC

This may not be feasible. SF.

3.5.5.1 Inspection, test, and surveillance considering vendor recommendations or documented basis for alternatives to ~~ensure~~ continued SSC functionality ~~under design basis conditions~~ and ~~including the potential for service induced aging~~. RC

What does this mean? GS

Don't do this now. GS

3.5.5.2 Activities accomplished in accordance with commercially accepted national consensus standards as applicable and to the extent that national consensus standards exist for a subject.

3.5.6 Corrective Action Process

(The NRC recognizes that STPNOC has not requested exemptions from the 10 CFR 50, Appendix B, Criterion XV or XVI related to nonconformances and corrective actions.)

Root cause evals req'd? GS

3.5.6.1 Corrective action process to determine and feedback the cause of conditions adverse to quality (e.g., identified from the inspection, test and surveillance process and maintenance process) and to resolve the adverse condition.

3.5.6.2 Activities planned and accomplished in accordance with written approved and controlled procedures.

3.5.7 Management and Oversight Process

3.5.7.1 Activities planned and accomplished in accordance with written approved and controlled procedures.

Many LS/NRS activities will not warrant procedures. SF

Vague. SF GS

3.5.7.2 Assessments and follow-up actions.

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3.5.7.3 Training and qualification of plant personnel considering vendor recommendations and in accordance with commercially accepted national consensus standards as applicable and to the extent that national consensus standards exist for a subject. — What documentation is req'd? GS

3.5.7.4 Documentation to support Section 3.5 processes. | Such documentation is not warranted for LSS/NRS components. SF GS

3.5.7.5 Control of inspection, test and surveillance equipment. — Vague GS

3.5.8 Configuration Control Process

3.5.8.1 Configuration control of SSCs and plant documents (e.g., procedures and drawings) to reflect current plant status and design changes. — Vague GS

4.0 LICENSING BASIS DOCUMENTATION GUIDELINES

4.1 STPNOC's exemption request should provide the basis to support granting the exemptions as a stand alone document.

4.2 STP has requested that all commitments associated with safety-related LSS and NRS SSCs be deleted. Commitments should continue to be managed in accordance with the NRC-endorsed commitment management guidelines in NEI 99-04, "Guidelines for Managing NRC Commitment Changes." If there are regulatory obligations associated with certain commitments for LSS and NRS SSCs for which STP believes an exemption is warranted, STP should explicitly identify these requirements and the basis for granting these additional exemptions. — Not an accurate description. SF GS

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