

April 19, 2013

MEMORANDUM TO: Robert B. Elliott, Chief
Technical Specifications Branch
Division of Safety Systems
Office of Nuclear Reactor Regulation

FROM: Carl S. Schulten, Sr. Reactor Engineer */RA/*
Technical Specifications Branch
Division of Safety Systems
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SUBJECT: RESPONSE TO PUBLIC COMMENTS ON DRAFT
REGULATORY ISSUE SUMMARY (RIS) 2013-XX, NRC
POSITION ON THE RELATIONSHIP BETWEEN THE GENERAL
DESIGN CRITERIA AND TECHNICAL SPECIFICATION
OPERABILITY (TAC No. ME8702)

A notice of opportunity for public comment on the subject RIS was published in the *Federal Register* (77 FR 45282) on July 31, 2012. Comments were received from the Nuclear Energy Institute (ML12258A070) and the Technical Specifications Task Force (ML12264A046). Enclosed is the staff response to all public comments.

Enclosures: As stated

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NRC STAFF RESPONSE TO PUBLIC COMMENTS ON DRAFT REGULATORY ISSUE
SUMMARY 2013-XX, NRC POSITION ON THE RELATIONSHIP BETWEEN THE GENERAL
DESIGN CRITERIA AND TECHNICAL SPECIFICATION OPERABILITY

The U.S. Nuclear Regulatory Commission (NRC) staff published a notice of opportunity for public comment on the regulatory information summary (RIS) on the NRC staff (staff) position on the relation between general design criteria (GDC) and technical specification (TS) operability in the *Federal Register* (77 FR 45282) on July 31, 2012. The NRC received comment submissions from the Nuclear Energy Institute (NEI) (Agencywide Document Access Management System (ADAMS) Accession Number ML12558A070), and from the Technical Specifications Task Force (TSTF) (ADAMS Number ML12264A046). This document presents a summary and the staff's response to each comment.

The staff will, as appropriate, revise the draft RIS to include the response to public comments in the final version of the RIS.

NEI Comment and TSTF Comment 1

Two commenters questioned the NRC staff intention that the relation between the GDC and TS is not well understood and stated that the staff's proposed guidance does little more than restate portions of Manual Chapter Part 9900 and other guidance documents. Both commenters asked the NRC staff to reconsider issuing the guidance to ensure that current guidance provided in Inspection Manual Part 9900 is not modified.

NRC Response

The staff disagrees that the relationship between GDC and TS is not well understood. A recent topic discussed with utility executives on inspection findings to ensure a common understanding of the link between the GDC and TS during plant-specific actions required by Fukushima Lessons Learned Task Force orders showed the need to clarify the relationship between licensing basis design requirements, such as the GDC as incorporated into the plant CLB, and TS operability requirements. This RIS helps the NRC staff achieve a common understanding by restating or clarifying concepts for assessing operability and functionality thereby making known the NRC staff technical position, and minimizing potential misunderstandings by licensees.

The staff agrees that the proposed RIS contains the same information and regulatory positions as in current NRC documents such as Inspection Manual Part 9900 (this observation is consistent with the staff's position that the RIS does not constitute backfitting). However, the staff believes that the proposed RIS, by identifying these requirements and clearly spelling out the staff's long-standing positions on how GDC and TS are to be addressed when a licensee identifies non-conforming conditions, provides clearer guidance to licensees. No change was made to the RIS as a result of this comment.

TSTF Comment Number 2

The RIS should remove reference to the 1994 Murley memorandum, or place it in proper historical context. The Part 9900 guidance, issued in 2005, changed the historical use of the term "operable," by incorporating the concept of "functionality" for structures, systems, and components (SSCs) that are not required to be operable by a TS LCO. As a result, some

ENCLOSURE

degraded or nonconforming conditions described in the Murley memorandum as affecting “operability” may be considered to affect “functionality” under the 2005 Part 9900 guidance.

NRC Response

The staff disagrees that the RIS reference to the Murley memorandum should be removed, or with the implicit suggestion that the memo should be “place[d] in the proper historical context” by indicating that it no longer is applicable. The Thomas E. Murley guidance that describes the relationship between the CLB design requirements and TS is summarized in Part 9900, Appendix C.1, “Relationship Between the General Design Criteria and the Technical Specifications.” The positions reflected in the Murley letter enclosure were incorporated into the inspection guidance on operability, and issued in a supplement to Generic Letter 91-18. The industry and staff alike determined that degraded or nonconforming conditions described in the 1994 memorandum as affecting “operability or functionality” would apply since applicable concepts are in effect in Appendix C.1 in the Part 9900 guidance. No changes were made to the RIS as a result of this comment.

TSTF Comment Number 3

The draft RIS’s statement that TS are derived from the FSAR analyses and the staff safety evaluation is inconsistent with the regulations under 10 CFR 50.36. As stated in that regulation, TS are “derived from the analyses and evaluations included in the safety analysis report.” The TS are not derived from the NRC’s safety evaluation and the UFSAR does not typically include the operational restrictions in the TS.

NRC Response

The staff agrees with the comment. The RIS has been modified consistent with the comment.

TSTF Comment 4 Part 1

The draft RIS’s description “TS are intended to ensure that the most safety significant design features of a plant, as determined by the safety analysis, maintain their capability to perform their safety functions” is incorrect because it does not rely on the definition of Operability expressly incorporated into the Part 9900 guidance. The final RIS should only use defined terms from the Part 9900 discussion on operability and functionality to ensure current Part 9900 guidance is unchanged.

NRC Response

The staff agrees that the RIS should not change the staff guidance in Part 9900. In Comment 1 above, the staff stated its agreement with the commenter position that the proposed RIS contains the same information and regulatory positions in current NRC documents. The staff would find any language used in the RIS that would define new terms or change the guidance in current NRC documents or the policy statement of the Commission to also be contrary to the staff conclusion the RIS does not constitute backfitting. The staff response to this comment will not result in changes to the draft RIS for the reasons discussed below in the NRC staff response to Comment 4, Part 2.

TSTF Comment 4 Part 2

The draft RIS's description "TS are intended to ensure that the most safety significant design features of a plant, as determined by the safety analysis, maintain their capability to perform their safety functions" formulates a new statement on the purpose of TS that is neither consistent with the policy statement of the Commission nor does it have an established regulatory basis.

NRC Response

The RIS amplifies the Policy Statement to explain how "features that are of controlling importance to safety" are determined for TS. There is no difference in the meaning between the RIS and the Policy Statement. The text quoted by the commenter is in the discussion section of the Policy Statement, and the same policy statement starts out with the following statement of the purpose of Technical Specifications in the Background discussion:

Technical Specifications set forth the specific characteristics of the facility and the conditions for its operation that are required to provide adequate protection to the health and safety of the public.

The staff concludes that the statements of the purpose of TSs in the draft RIS and in the Policy Statement are complementary not contradictory statements that differ in text but not in meaning. In considering the reference to risk by the commenter that staff notes that initial facility licenses did not apply the insights of probabilistic risk assessment to identify the "most safety significant design features." Instead, the staff used deterministic methods to decide on scope and content of TSs requirements under 10 CFR 50.36 at the time of licensing. Therefore the RIS statement "Thus, TS are intended to ensure that the most safety significant design features of a plant, as determined by the safety analysis, maintain their capability to perform their safety functions" [emphasis added] is consistent with the authority given to the NRC staff under the Atomic Energy Act of 1954, as amended, for identifying plant features of controlling importance to safety when developing plant-specific TSs. The staff response to this comment will not result in changes to the draft RIS.

TSTF Comment Number 5

The draft RIS operability determinations for nonconformances with the GDC should be more consistent with Part 9900 guidance. The RIS does not communicate clearly enough that licensees may be able to determine that nonconformance with certain GDC, such as GDC 60, "Control of releases of radioactive materials to the environment" will not affect a specified safety function or required support function of a TS SSC.

NRC Response

The staff disagrees with the inferred statement that the staff's position means an identified nonconformance with a GDC requires an evaluation if the GDC will not affect or alter the status of a TS SSC. Part 9900, Section 4.0, Documentation states:

Adequate documentation is necessary to establish a basis to allow for subsequent independent reviews. Immediate determinations need not be extensively documented; for example, it may be appropriate to accept a checked box. Plant record systems, such as operator logs or the corrective action program, are often sufficient documentation.

The language of the staff's stated position in the RIS for assessing a nonconformance with a GDC conveys the same expectation as the guidance in Part 9900 without citing pertinent parts from Section 4.0. The RIS does not incorporate this recommended change.

TSTF Comment Number 6

The RIS paragraphs discussing TS Operability Determinations and the GDC should use the language "specified safety function and necessary and related support function" in lieu of "safety function" when referring to the TS definition of Operable – Operability and it is incorrect for the RIS to infer that Part 9900 is a requirement to be followed. Also, these paragraphs define "degraded condition" without referring to the term in the discussion and quote a part of the Part 9900 defined term nonconforming condition while the remainder of the definition is included, but not as a quote, and it varies from the Part 9900 guidance definition.

NRC Response

The staff agrees in large part with the comment. The staff chose to clarify the draft RIS to read "an SSC required to be operable by TS remains capable of performing its TS safety function in the presence of the nonconforming condition." [emphasis added] In lieu of adding verbatim citations of "degraded condition" and "nonconforming condition" from Part 9900 the RIS text was modified to state only pertinent parts of the defined term that is cited. Also, item (4) of the Part 9900 examples of nonconforming conditions listed in the RIS is revised to delete the reference to 10 CFR 50.59.

TSTF Comment Number 7

The RIS should be revised to quote the definition of Operability in the ITS and the Part 9900 guidance. The draft RIS states:

"Section 3.8 of Part 9900 covers the definition of operability. The definition includes the following statement: In order to be considered operable, an SSC must be capable of performing the safety functions specified by its design, within the required range of design physical conditions, initiation times, and mission times."

The quoted statement does not appear in the definition of Operability as used in the Part 9900 guidance and is contrary to the definition of Operability as it states, "safety functions" and not "specified safety functions" (which are required for Operability) and attempts to expand Operability beyond the definition in the TS.

NRC Response

The staff acknowledges the comment and will change the RIS to correctly explain that the quote is part of the discussion of the definition Operable - Operability. The RIS cites Part 9900 guidance and therefore does not, as stated, expand Operability beyond the definition in TS. Instead, this discussion that TS SSC must be capable of performing the safety functions specified by its design, within the required range of design physical conditions, initiation times, and mission times is consistent with TS is consistent with guidance that an operability determination must conclude there is a reasonable expectation that the TS SSCs will operate as designed. The draft RIS will not be revised to reflect the requested change.

TSTF Comment Number 8

The quotes of Section 3.10 of the Part 9900 guidance for the definition of specified function/specified safety function are reversed from the usage in the ITS definition of “Operability” and represents an error in the guidance that should not be propagated in the final RIS.

NRC Response

The staff disagrees that the defined term Specified Function – Specified Safety Function is an error in the Part 9900 guidance but agrees that in a few instances the terms are misapplied. This resulted in discussions assessing the impact of non-TS support systems on the operability of TS required SSCs. In Part 9900 the staff chose “Specified Function - Specified Safety Function” to have the same definition to ensure the processes for assessing degraded or nonconforming conditions adverse to quality or safety would apply equally to the licenses of 26 operating plants that use “specified function” in the definition of Operable – Operability, as it does to ITS plant which use “specified safety function” in the definition of Operable – Operability. The NRC staff response to this comment will not result in changes to the draft RIS, but will result in changes to the Part 9900 in the next revision to correct errors to properly apply the Part 9900 definition 3.10 Specified Function/Specified Safety Function to the body of the guidance document.

TSTF Comment Number 9

Operability determination processes should be discussed in the RIS from the viewpoint of the licensee having procedures that implement Part 9900 these processes. To be more consistent with the Part 9900 guidance the RIS should emphasize that any nonconformance with the GDC calls into question the ability of SSCs to perform their specified safety function or necessary and related support function is an entry point for an operability determination by licensees.

NRC Response

The staff agrees in part with the comment. Conditions assessed by an operability determination are those that call into question the operability of a TS structure, system or component. The final RIS has been revised consistent with this comment to ensure the RIS does not depart from Part 9900 guidance, but without referencing licensee processes for formal determinations of operability. As revised, the RIS reads: “Thus, an operability determination (or functionality assessment) is appropriate upon identification of a degraded or nonconforming condition that calls into question the ability of SSCs to perform their specified safety function, including any nonconforming condition with a GDC included in either the CLB for an SSC described in TS or for a necessary and related support function required by the definition of operability” (emphasis added).

TSTF Comment Number 10 and Number 11

Some uses of the terms “operable” or “operability” in the 1994 Murley memo may now be considered “functionality” under the 2005 Part 9900 guidance making the reference to the 1994 memo not needed to support the position in the following paragraph. For this reason the RIS discussion should emphasize that any nonconformance with the GDC calls into question the ability of SSCs to perform their specified safety function or necessary and related support function is an entry point for an operability determination by licensees.

NRC Response

The staff agrees with the changes. The recommended changes are adopted to ensure new or different staff positions are not in the RIS. Based on this comment two paragraphs are revised in the final RIS read:

“The Part 9900 operability determination process is appropriate when a licensee identifies any nonconformance with GDC 2 or its equivalent, as incorporated into a plant licensing basis (e.g., nonconformance with the CLB for protection against flooding, seismic events, tornadoes, etc.) that calls into question the ability of SSCs to perform their specified safety function(s) or necessary and related support function(s)” (emphasis added); and

“Failure to meet GDC 2, as described in the licensing basis should be treated as a nonconforming condition and is an entry point for an operability determination for any impacted TS-required SSC or a necessary and related support function if the nonconforming condition calls into question the ability of SSCs to perform their specified safety function(s) or necessary and related support function(s)” (emphasis added). The final RIS has been revised to read as set forth in the comment.

TSTF Comment Number 12

Licensees should enter the operability determination process to evaluate the impact on operability of not meeting the CLB requirement for tornado missile protection only if EDG (SSC) operation following a tornado missile is required by a combination of the effects of normal and accident conditions assumed in the licensing basis.

NRC Response

The staff disagrees with the comment. The presumption of operability is required before, during and after the occurrence of natural phenomena when the natural phenomena occur during a mode or other specified condition in the applicability of an SSC included in technical specifications. The commenter’s proposed language is incorrect. It presumes that there must be an assumption of simultaneous natural phenomena concurrent with an accident in order to have to consider operability for a nonconformance with GDC 2. This assumption is not required in order to require the licensee to perform an operability determination. The EDG in the example is required to be operable whenever it is an applicable mode or condition. Since the EDG was also required to be designed to withstand a tornado in accordance with GDC 2, the EDG must remain operable before, during and after a tornado event, for as long as the plant is operating in an applicable mode or condition that requires EDG operability. The NRC staff chose to retain the draft RIS language to ensure the focus of the discussion is on the affect of natural phenomena on making a determination of operability, i.e., capable of performing it’s (the SSC) specified safety function. No change to the RIS was made as a result of this comment.

TSTF Comment Number 13

The “Summary” of the RIS should be revised to be consistent with previous comments. Specifically, the italicized words in paragraph below should be included.

Any nonconformance with a GDC in the CLB that *calls into question the ability of an SSC to perform its specified safety function(s) or necessary and required support function(s)* has the

potential to negatively impact the operability of a TS SSC and must be evaluated to determine if the nonconforming condition has rendered any TS SSC inoperable.

NRC Response

The staff has revised to RIS format to include key messages in the “Summary of the Issue” section of the RIS making the comments referenced to the Summary moot because the section is superseded in the new format. No change to the RIS was made as a result of this comment.

TSTF Comment Number 14

The RIS uses the acronym “GDCs” when referring to the General Design Criteria. A more appropriate acronym is “GDC” as the word “criteria” is plural.

NRC Response

The NRC staff disagrees. GDC refers to general design criterion, and the NRC’s longstanding practice is to refer to multiple criteria as “GDCs.” No change was made to the RIS as a result of this comment.