

January 25, 2002

Mr. Biff Bradley
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Dear Mr. Bradley,

The Nuclear Regulatory Commission (NRC) has completed its review of the Nuclear Energy Institute White Paper of December 19, 2001, on Risk Management Technical Specifications Initiative 7, titled "Impact of non technical specification design features on OPERABILITY requirements." Enclosed are staff comments on the white paper, provided in accordance with the scheduled agreed upon by the Technical Specification Section of the NRC and the Risk Informed Technical Specification Task Force. We are prepared to meet with you to further discuss these comments and assist in making progress on Initiative 7.

Please contact me at (301) 415-1156 or e-mail rld@nrc.gov if you have any questions or need further information.

Sincerely,

/RA/

Robert L. Dennig, Section Chief
Technical Specifications Section
Operating Reactor Improvements Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Enclosure: As stated

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Response to White Paper of December 19, 2001 on Risk Management Technical Specification Initiative 7

The NRC Staff has reviewed the White Paper on Risk Management Technical Specifications Initiative 7, submitted on December 19, 2001. The Industry has been very responsive to the staff concerns expressed in dialog on Risk Management Technical Specifications (TS), and the White Paper is a step forward in the development of Initiative 7. The following comments and questions are offered in order to better understand and advance the effort.

1. The initiative 7 paper discusses proposed TS 3.0.8 which is TSTF-372 Rev. 1. TSTF-372 Rev. 1 is for snubbers only and is not risk-informed. The initiative 7 paper proposes to add TS 3.0.9 which would be risk-informed but also has snubbers on the list of affected equipment. Please clarify the relationship between TSTF-372 Rev. 1 and Initiative 7, especially with regards to snubbers.
 - a. What is the purpose of introducing two new LCOs? Wouldn't one be adequate to address all non-TS equipment which can impact the operability of TS-equipment?
 - b. If LCO 3.0.8 is considered, in addition to LCO 3.0.9, what approach is being considered to support the proposed deferral period?
2. It is not clear how TS 3.0.9, applied to ventilation systems is consistent with the "features in place solely to address low probability events." Unlike barriers, ventilation systems may not be there just for a low probability initiator, but rather to support long-term operation (maintaining equipment temperature within qualification specifications). It is also unclear whether the TS could be applied to any ventilation system (assuming it is not already explicitly in the TS), regardless of equipment being serviced, or only if the ratio ($IE_{\downarrow} / IE_{\uparrow}$) is less than .001.
3. The paper proposes that the approach in TS 3.0.9 be used not only for planned activities but for discovery of degraded conditions, stated parenthetically as "a risk-informed alternative to the Generic Letter (GL) 91-18 approach." Please clarify your intent. The overall GL 91-18 approach includes elements of identification and assessment of nonconformances/degraded conditions, determining safety (of continued operation), establishing compliance with TS (operability) and taking corrective action. It appears that rather than being "an alternative" to the approach, what is being proposed is that the means of determining safety is by the risk assessment, and the means of complying with TS is through a determination that the degradation is limited to a design feature covered by 3.0.9 (this TS then provides the time frame during which continued operation is acceptable before the design feature is restored). The parts of the GL 91-18 approach not being changed are prompt (commensurate with potential safety significance) determination of operability (i.e., what is the impact of the identified condition), and the need for corrective action.
4. The initiative 7 paper states that use of the provision (in TS 3.0.9) is limited, at a given time and for specific initiating events to one train of a multi-train system. Does this mean that design features for more than one train (within different systems) could be out, if for instance, one is for high energy lines and one for flooding (and the risk assessment so supports)? Also, could TS 3.0.9 be used in combination with flexible AOTs for the supported system; if so, under what conditions or circumstances?

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5. 10 CFR 50.65 (a)(4) and Technical Specifications are different. This needs to be made clear in the initiative 7 paper. As written the initiative 7 paper has the feeling that if you comply with 50.65(a)(4), you comply with this new TS 3.0.9 too. This may not be the case because 50.65(a)(4) has only one purpose, to assess and manage increase in risk potentially caused by maintenance. The NRC regulatory guide and industry guidance expand on how to do this. When making general comments about maintenance rule in a non-maintenance context it is probably a good idea to say things like “maintenance rule like” or “(a)(4) like” assessments. This initiative sounds like you’re really developing a TS LCO deferral-time risk assessment and offering licensee’s some flexibility accomplishing this assessment by using some elements in existing licensee programs currently used to comply with other NRC regulations. More specific comments are included:
 - a. Page 1, Definition Section, last sentence: Rephrase to eliminate the statement that the condition will be evaluated and managed under the maintenance rule plant configuration control requirement and associated industry guidance. As stated above, 50.65(a)(4) is only bounding on maintenance activities. Example wording could be “perform an 50.65(a)(4)-like assessment which includes qualitative and quantitative considerations as outlined in NUMARC 93-01, Section 11.”
 - b. Page 2, 1st paragraph, last sentence: Rephrase to say the intent of this initiative is to develop a predetermined deferral-time risk assessment utilizing a 50.65(a)(4)-like risk assessment approach for the temporary removal of plant design features not contained directly in the TS.
 - c. Page 3, item 1: Rewrite because if a licensee takes barrier out for non maintenance activity there will not be an existing (a)(4) assessment.
 - d. Page 4, item 2, 1st sentence: Rephrase to say “For the interval of the deferral time, the risk increase associated with the degraded design feature will be assessed and managed under a maintenance rule like plant configuration control requirement.”
 - e. Page 6, Table 2, Change column heading “Protective Function” to “Design Feature.” The term protective function has a very specific meaning for use in the instrumentation and control circuitry in reactor protection systems. Generally a protective function in I&C usage denotes something very important (i.e., can not be removed from service for very long if at all). Using the term protective function may lead to some confusion if mentioned in the same breath as 30 day LCO deferral.
 - f. Page 7, Estimation of the “deferral time”: The assessment is only limited to three parameters. NUMARC 93-01, Section 11.3 references several other considerations that may be useful.
6. On page 3 it is stated that the proposed approach for RITS Initiative #7 “...is to provide a new LCO 3.0.9and a new Bases tablewhich would list risk-informed deferral times due to nonfunctionality of listed design features.” The staff expects to review the supporting analyses on which the information in the new Bases table will be based. Such analyses will need to address design and operational differences among the U.S. nuclear power plant population.

7. Overall the proposed approach appears to be good. However, the staff does not have much information regarding its implementation. The implementation of the proposed approach will need to address:
 - a. The identification of support non-TS equipment to be included in the LCO 3.0.9 Bases as well as the TS equipment each one supports;
 - b. The relationship between each support non-TS systems and the supported TS system (e.g., how is it supported, under what conditions the support system cannot be relied upon to support the TS system, etc);
 - c. The analyses, assumptions and criteria used to establish relationships between supported and support systems;
 - d. The potential that the unavailability of some non-TS support equipment will impact multiple TS equipment, including redundant equipment in same system or in systems performing similar functions during accidents (defense-in-depth).
 - e. The variability among different plant layouts as well as other design and operational features;
8. On Table 1 (page 5), fire and flood doors and barriers are proposed to be included in LCO 3.0.9. Was it taken into account that a fire or flood propagation to adjacent areas can fail multiple equipment, including redundant equipment? What assumptions are made regarding separation of redundant equipment?
9. On page 8 it is stated that “It is more difficult to estimate a typical, generic value for the RAW of the protected equipment. Accordingly, the estimation is performed for RAW values of 2, 10, 50 and 100.” Since these values are controlling, the industry needs to explain how these RAW values are (will) be estimated.
10. Doors and Barriers on Table 1 and Hatches on Table 2 should include high winds and tornados on the list of relevant initiators and initiating event.
11. The proposed LCO 3.0.9 wording would state that “the technical specifications LCO is considered to be met.” The staff would prefer the wording “technical specifications entrance is being deferred.” The proposed 3.0.9 wording has the potential to affect equipment availability and performance indicator tracking.
12. It is not clear what information will be included in the table in the bases.
13. Clarification is required as to whether a licensee can make multiple entries into TS 3.0.9. Additionally, it is not clear what a licensee would do when it works on multiple train systems. Would TS 3.0.9 be entered when work is performed on Train A and then exited before work begins on Train B?
14. The equations on page 8 are not correct and need to be revised. As a result, the answers on table 2 are affected slightly. Specifically, CDF_{base} needs to be subtracted from the quantity $(RAW_j \times CDF_{base})$ in the ICCDP equation. This will also affect the T_D equation.