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Secretary of the Commission  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
Attn: Docketing and Service Branch

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PR-50  
(47 FR 13369)

Dear Sir:

This letter is in response to the Federal Register Notice of Tuesday, March 30, 1982 concerning reduction in the volume of Technical Specifications for Nuclear Power Reactors. We offer the following comments to the proposed changes to 10 CFR 50.36. We at ANI/MAELU were pleased to see the efforts being made at the commission to simplify and reduce the volume of technical specifications. We also feel that a set of concise technical specifications addressing the key parameters which assure power reactors are operated in a manner consistent with the assumptions of the safety analysis will help to assure safer operation and reduced risk. The proposed rule goes a long way toward supporting this objective. The purpose of this letter is to offer some recommendations for improving that proposal. These recommendations are as follows:

1. The proposed rule should apply to all facilities.
2. The reasons for a technical specification should be documented to an extent beyond a summary statement of the bases for the technical specifications.
3. The Technical Specification document should be divided into two categories namely, Operational Specifications and Support Specifications.
4. The purposes of the of all categories of should be stated in the rule.
5. For added clarity of definition the first sentence of Paragraph (d) (1) (ii), Limiting Safety Systems Settings, should be revised.
6. Since, in general, it is not possible to comply with the second sentence of Paragraph (d) (1) (ii), this should be rewritten.
7. Several ambiguous terms appearing in the rule should be systematically removed.
8. The four safety functions given in Paragraph (d) (1) (iii), are broad and vague and should be revised.

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9. Each Limiting Safety System Setting should correspond to at least one Check and Test Requirement.
10. The Paragraph (d) (1) (u) referring to Operational Staffing and Reporting Requirements should be revised.
11. The Paragraph (d) (2) referring to Principal Design Feature Specifications should be revised.
12. The intent of the Paragraph (e) referring to Supplementary Specifications should be clarified.
13. The Paragraph (e), (1) referring to Control Provisions should be split to separately refer to Operational Limits and Conditions and to Operational Specifications.

Described below are the elaborations and explanations for each of the 13 comments above. These have been numbered to correspond to the comments above.

1. The rule as written would only apply to facilities that are issued an operating license after a date 180 days after the effective date of the rule. This would reduce the impact of the rule to such an extent that it hardly seems worthwhile to make the change. This would also result in multiple unit facilities with different technical specifications. We would prefer to see the rule apply to all facilities or not make the change.
2. More than a summary statement of bases or reasons for the specifications should be documented. The purpose of the bases is to document the necessity and appropriateness of each requirement and thereby to facilitate the review of any proposed revision to a requirement. A clear definition of the rationale for including a particular requirement will aid the operator in understanding his plant and applying the technical specifications to plant operation, and will give the plant staff a clearer understanding of the effects of changes in the plant design. This will also facilitate Commission review of the changes to the specifications.

An adequate bases section should contain the documentation of the judgements necessary to validate the safety analysis, and should demonstrate that neither too many nor too few requirements are included. It should also demonstrate that requirements of degree are neither too conservative nor too relaxed. To achieve this end, the bases should identify which events set the need for a particular requirement. A complete set of bases, as suggested here, would serve as a cross-check to assure that the requirements of each design basis event are covered. We concur that the bases should not be part of the technical specifications. However, they should be part of the FSAR and kept current.

3. The division of the technical specifications into two categories, is an important and useful step. We suggest that the whole document still be referred to as Technical Specifications. The two categories might then be entitled Operational Specifications and Support

Specifications. This would serve to better convey the fact that the two categories still constitute the same information as is intended in the present Technical Specifications of plants.

4. We believe the proposed rule would be even more effective if the purposes of the Technical Specifications, Operational Specifications, Support Specifications and bases were stated in the rule. This would give the Commission staff more positive direction as to what should be and should not be included in each part. The suggested wording for these purposes would be as follows:

The purpose of the Technical Specifications is to validate the technical assumptions relied on in the safety analysis performed for a nuclear power station.

The purpose of the Operating Specifications is to impose those conditions under the cognizance of the operator, necessary to provide: (1) that normal plant operation and anticipated operating occurrences will not violate a safety limit; (2) that the safety functions required to limit fuel damage and to contain the products of an accident are capable of being accomplished; and (3) that the plant staff is in the state of readiness required to respond to matters of immediate importance to safety.

The purpose of the Support Specifications is to ensure: (1) that the probability of a severe accident due to long term equipment quality degradation is sufficiently low; (2) that the long term physical condition and characteristics of the plant are not degraded; and (3) that the administration of the facility is conducted in a manner which will preserve the assumptions of the safety analysis.

The purpose of the bases is to document the necessity and appropriateness of each requirement and thereby to facilitate the review of any proposed revision to the requirement.

5. For clarity of definition, the first sentence of Paragraph (d) (1) (ii), Limiting Safety System Settings, should be revised to read:

Limiting Safety System Settings are settings for all automatic protective devices necessary to maintain the safety functions.

This change removes the ambiguity as to which variables have significant functions.

6. The second sentence of Paragraph (d) (1) (ii), Limiting Safety System Settings, is impossible to comply with. As written, it can be met only for anticipated operational occurrences. Many accidents will result in its violation. As Limiting Safety Settings are intended to apply only to anticipated operational occurrences, the rule should specifically state that this is the intended application. An example of this is that the reactor trip on low pressurizer pressure will prevent the safety limit on departure from nucleate boiling ratio (DNBR) from being violated for an event initiated by a pressurizer

power operated relief valve failing open, an anticipated operating occurrence. This same trip will not prevent this safety limit from being violated for a large loss of coolant accident, nor will any other.

To remedy this problem, the second sentence of Paragraph (d) (1) (ii), should be replaced with the following two sentences:

Where a Limiting Safety System Setting is specified for a parameter protecting a safety limit, the setting must be chosen so that for anticipated operational occurrences, the automatic protective action will prevent the violation of the safety limit. For accidents, the Limiting Safety System Setting must be chosen so that the technical assumption of the safety analysis are preserved.

7. Throughout the proposed rule many ambiguous terms appear which are not present in the existing rule. Such terms as "relating to", "associated with", "in a safe manner", "important to safety", and "effective" are open to interpretation and should be deleted and replaced with more specific guidance for the Commission staff and industry. The need for more specific criteria in the regulations was one of the factors that prompted this revision to the rules.
8. The four safety functions given in Paragraph (d) (1) (iii), Operational Limits and Conditions, are broad and vague. It is not clear how they relate to the "safety functions" of Paragraph (e) (1), Control Provisions. The industry and the Commission staff are currently using a larger, more specific set, as given in NUREG/CR-2300, PRA Procedures Guide.

To incorporate these and clarify Paragraph (d) (1) (iii)'s applicability, the first sentence of this paragraph should be revised to read:

Operational limits and conditions are limits on the range or process variable and conditions which ensure that the operating state and standby status are preserved for systems and components that the safety analysis requires for accomplishment of the ten critical safety functions following an accident, i.e.,:

- Reactivity Control
- Reactor Coolant System Inventory Control
- Reactor Coolant System Pressure Control
- Core Heat Removal
- Reactor Coolant System Heat Removal
- Containment Isolation
- Containment Pressure and Temperature Control
- Combustible Gas Control
- Indirect Radiological Release Control
- Maintenance of Vital Auxiliaries

9. There should be a least one Check and Test Requirement in Paragraph (d) (1) (iv) corresponding to each Limiting Safety System Setting. It is not clear that saying "to assure that facility operation will be

within the safety limits" adds any requirement to this section. The Limiting Safety System Settings accomplish this for normal plant operation and anticipated operational occurrences, as well as mitigating accidents. Limiting Safety System Settings are not "met" by the Check and Test Requirements. A suggested rewording of this section is:

Check and Test Requirements are those periodic checks and tests that assure that the operational limits and conditions are met. Their performance will assure that protective systems will actuate within the allowable range of the limiting safety system settings, and will ensure that normal plant operation and anticipated operating occurrences will not result in the violation of a safety limit.

10. To clarify Paragraph (d) (1) (v), Operational Staffing and Reporting Requirements, should be revised to read:

Operational staffing and reporting requirements define the shift crew composition, responsibility and reporting that are necessary to assure operation in the manner implicit in the safety analysis.

11. Paragraph (d) (2), Principal Design Feature Specifications are not within the cognizance of the operator and should be in the Supplementary (Support) Specifications. For clarity this paragraph should be revised to read:

Principal design feature specifications are those features of the facility, such as materials of construction and geometric arrangements, that if altered or modified will invalidate an assumption of the safety analysis and that are not covered by another Technical Specifications.

12. To clarify the intent of Paragraph (e), Supplementary Specifications, its second sentence should be revised to read:

Supplemental specifications are monitoring, control and administration provisions necessary to assure that the quality of equipment, the proper operating state and standby status of systems not under the operator's cognizance and management overview and control of facility changes and operations are maintained in a manner which will assure the validity of the safety analysis.


As presently written, this paragraph could be interpreted in a way that would cause the Supplemental (Support) Specifications to expand to the volume of the present Technical Specifications. Particularly the term "important support systems" could be interpreted to mean almost any system in the facility. For example the steam dump and bypass system could be considered an important support system under this section, in that it prevents challenges to protective systems (e.g., safety valves) and, if it operates properly, reduces the approach to safety limits and mitigates certain accidents. The key

feature of the steam dump and bypass system is that it is not required in order to validate an assumption of the safety analysis. Current safety analyses consider the operation or non-functioning of such a control system and account for its failure in an undesired mode.

13. Paragraph (e) (1), Control Provisions, includes Check and Test requirements. It would be appropriate to split this paragraph into two paragraphs that would correspond to the Operational Limits and Conditions section and the Check and Test Requirements section of the proposed Operational Specifications.

In Summary, we concur with your efforts to reduce the volume of critical technical specifications in order to produce a clear concise document. It is hoped that the above comments will be useful in that process.

Very truly yours,

  
John Honey  
Director of Operations

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cc: Leo Mariani